The Mining Journal
AND ATMOSPHERIC RAILWAY GAZETTE.

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

No. 602.—Vol. XVII. LONDON, SATURDAY, MARCH 6, 1847. [Price 6d.

VALUABLE MINING MATERIALS, 70-inch cylinder STEAM-ENGINE, 36-inch ditto, STEAM-WHIM, BOILERS, ENGINES, &c., FOR SALE.—TO BE SOLD, BY PUBLIC AUCTION, by Mr. PRYOR, at SOUTH TOWAN MINE, in the parish of St. Agnes, on Monday, the 8th day of March next, at Eleven o'clock in the forenoon, the following MINING MATERIALS, consisting of

1 70-inch cylinder STEAM-ENGINE, 10-feet stroke in the cylinder, and 7½-feet in the shaft, with brass condensing work and three boilers, about 25 tons
1 18-inch cylinder STEAM-WHIM, complete, with one boiler, about 8 tons
17 9-feet 16-inch PUMPS
2 9-feet 13-inch ditto
2 9-feet 11-inch ditto
1 8-inch doorpiece
4 15½-inch, and 1 13-inch plunger poles, with stuffing-boxes and glands
A large quantity of faggoted iron, and other rod-plates
15 Flat-rod shieves
28 3 and 4-feet whim ditto
4 Pairs caps 1 Pair knuckle joints
2 Sets shaft rollers. 20 Plummer blocks
1 Pair yokes Smiths' tools
A quantity of tram-irons and waggon wheels
Several fathoms of iron stand ladders
Steam and horse-whim kibbles, steam pipes, several thousands of bricks
A large quantity of new and old timber and iron, &c. 1

The above are confidently recommended to the notice of mine agents and others.
The sale will commence at Eleven o'clock in the forenoon precisely.
Dated Comfort, Feb. 24, 1847.

TO BE SOLD, BY AUCTION, at WHEAL KENDALL MINE, in the parish of LANLIVERY, on Thursday, the 11th of March, 1847, at Eleven o'clock in the forenoon, the following

MINING MATERIALS—viz.:

1 40-feet WATER WHEEL, 3 feet 4 inches in breast, cast-iron axle and sockets, cranks, and every thing complete
46 Fathoms of 6-inch rods, strapping plates, and pins, complete
3 Balance-bobs, complete
230 Fathoms of 1¼-inch iron rods, with joints and pins, complete
95 Cast-iron shieves, to suit, capstan and shears, complete
50 Fathoms of capstan rope, horse-whims, with tackle, complete 2
2 10-feet 9-inch windbores, 2 4-feet 9-inch ditto
2 9-inch 6-feet C. S.-pieces, 1 10-inch H-piece, windbore, and top door-piece
1 9-inch plunger pole, pole case, stuffing-box and gland
4 9-inch 9-feet workings
3 9-feet 11-inch PUMPS, 1 6-feet 11-inch ditto. 12 9-feet 10-inch ditto, 1 6-ft. 10-in. ditto, 1 9-feet 12-inch ditto, 1 9-feet 6-inch ditto, 9-feet 8-inch ditto
1 36-inch smith's bellows, 1 32-inch ditto
Miners' and smiths' tools, anvils, steel vice, taps and plates, ladders, buckets, and seatings, old and new iron
A quantity of timber, and various articles used for mining purposes
The whole being nearly new, and worthy of attention.
Dated March 2, 1847.

TO CAPITALISTS, RAILWAY COMPANIES, COAL AND IRONMASTERS, &c.—GLOUCESTERSHIRE, DEAN FOREST.

RARE AND ELIGIBLE INVESTMENT.

TO BE DISPOSED OF, BY PRIVATE CONTRACT, all that superior GALE, or COAL-FIELD, known as the EAST SLADE COLLIERIES (under the award of her Majesty's Dean Forest Mining Commissioners to the Cheltenham and Forest of Dean Coal Mining Company), situated in the township of WEST DEAN, near Ruardean, containing

ABOUT ONE HUNDRED AND FIFTY ACRES OF FIRST-RATE QUALITY UNWORKED COAL;

And is galed to the Hill Delf Vein, which varies in thickness from 5 to 6 feet, and will yield, in every square or superficial yard, 1¼ ton of coal; and stated by her Majesty's Commissioners of the Forest of Dean to be one of the most extensive and best works opened in the Forest of Dean. There are four pits, or shafts, sunk down to the coal, with two condensed steam-engines, pumping apparatus, weigh-bridge, &c., to which extensive stabling and other necessary buildings are attached.

It is situated within about half a mile from the Gloucester and Dean Forest Railway, and the Gloucester, Hereford, and Monmouth Railway, and is equally well situate for Severn and Wye transit; and, with judicious management, would pay a large return for the outlay.

N.B.—This colliery contains upwards of a million tons of coal, after deducting for pillar, dead, and waste, and would supply 50 tons a-day for 70 years; if raised at 1s. per ton, would be upwards of £50,000.

For particulars apply at the offices of Mr. Henry Beaumont, Bampfylde-street, and Mr. R. Tripp, 13 and 18, High-street, sharebrokers and mining agents, Exeter; Mr. R. Wells, Winchcombe-street, Cheltenham; Messrs. Watson and Cuell, 1, St. Michael's-alley, Cornhill; Mr. J. Davis, 75, Old Broad-street; or Mr. J. Lane, 75, Old Broad-st., London.

VALUABLE CHINA CLAY WORKS FOR SALE.—CAPITAL INVESTMENT for any Gentleman, or Company of Gentlemen, who have a small unemployed capital at their disposal.—TO BE SOLD, BY TENDER, for a term of 21 years, from the 25th of March next, subject only to the usual lords' dues of 5s. per ton, all those very valuable CHINA CLAY WORKS, situate in the parish of ST. STEPHENS-IN-BRANWELL, in the county of Cornwall, called the

GREAT TREVISCOE CLAY WORKS,

Together with the ENGINE and MACHINERY now used in drawing the clay to the surface, and the PITS, PANS, SHEDS, and all other conveniences. 4

There is now about 1000 tons of dry clay in the sheds, and about 700 tons in the pans, for the spring saving—all of which will be comprised in the same lot.

The quality of the clay requires no observation, it being admitted to be the best sample that is raised in Cornwall.

Mr. Joseph Richards, the tenant on the estate, is authorised to show the clay work, and of whom, or of William Vallance, Esq., No. 10, Chapel-walks, Liverpool, of H. T. Triscott, Esq., No. 33, New Bridge-street, Blackfriars, London, of John Saunders, Esq., Notte-street, Plymouth, or of Mr. William Clyma, auctioneer, Truro, any other information may be obtained, and a plan of the clay work may be seen—showing the supposed run of the beds of clay.

Tenders for the above will be received by the said Mr. Wm. Clyma, until the 25th of this month, immediately after which the person whose offer is accepted will have notice.
Dated March 3, 1847.

VALUABLE COAL MINES.—TO BE LET, ON LEASE, all those THREE several superior BEDS OF COAL, called the WATERLOO COAL, the MAIN SOFT COAL, and the LOWER HARD COAL, lying and being under 133 acres of land, situate at BRINSLEY, in the county of Nottingham.

Abutting to the above, and drained by the same level, are about 360 acres of the two last-named beds, belonging to noblemen and parties willing to lease the same—forming together (and without a fault) 493 acres of excellent coal seams. The bottom one is peculiarly adapted for iron-making.

The Erewash Valley Railway (the most direct London line) connects the property by a short branch; and the Ambergate, Nottingham, and Boston line will pass within 30 yards of the deepest point of the estate.

For further particulars apply to Messrs. Lucas and Cutts, solicitors, Chesterfield; or Mr. Thomas Goodwin, mineral agent, Ripley, Derbyshire.
Feb. 13, 1847.

TO CAPITALISTS.—CARMARTHENSHIRE AND GLAMORGANSHIRE, SOUTH WALES.—The AGENT of an extensive estate, calls the attention of Ironmasters, Colliers, Manufacturers, Farmers, and Capitalists in general, to this announcement—he is prepared to ENTER into ARRANGEMENTS with respectable PARTIES for the LEASING, on long terms, of VARIOUS DESCRIPTIONS OF PROPERTY, now the object of public attention—Anthracite and Bituminous Coal and Culm, Ironstone, Limestone, Marble, Flag, and other quarries—Fire Clay and Brick Earth. Land for erecting at, and near, a flourishing and fast-rising commercial town), seaport, and floating dock, manufactories, shipbuilding yards, wharfs, store and dwelling-houses; and, in the coal and iron districts, SITES for WORKS, joining a railroad and canal, leading, by their main trunks and branches, to three seaports—water-power in almost general.—SITUATIONS for RURAL and MARINE RESIDENCES in the most beautiful parts of the country, commanding views of Swansea and Carmarthen Bays, and the Black Mountain, with good roads, cheap markets, and daily communication with Bristol, Gloucester, and the metropolis. 5

The estate is situated in 24 parishes, offering, in every variety of soil and scenery, numerous objects of interest to the geologist, the sportsman, and the admirer of the picturesque. As an inducement to capitalists to embark in such agricultural improvements, as draining, planting, erections of proper homesteads, &c., which now so deservedly occupy public attention, LEASES of NINETY-NINE YEARS will be granted for these purposes. Cheap food, labour, fuel, and raw material of every description, will give the manufacturer an advantage over every other part of Great Britain; while the large and still increasing trade in coal affords an intercourse with all parts of the world, for importing the produce of their localities at cheap back freights, and for forwarding to their destination the manufactured articles. This more particularly applies to those undertakings where the consumption of coal forms a principal ingredient.

The South Wales Railway will pass through the town, touching the three seaports, and going over a large proportion of the estate on the sea-coast; while the contemplated inland railways will bring the collieries, ironstone, limestone, and stone quarries, within an easy distance of the agricultural counties of Hereford and Worcester, and the great chain of railway communication, connecting Birmingham, Liverpool, Manchester, and all the important manufacturing districts of England.

For further particulars apply to F. L. Brown, solicitor, Llanelly; John Williams, solicitor, 1, Verulam-buildings, Gray's Inn, London; Messrs. Brooks and Green, estate agents, 28, Old Bond-street, London; Mr. John Farram, estate agent, 29, Seel's-street, Liverpool; Alfred Henderson, solicitor, Albion Chambers, Bristol; Messrs. Horsfold and Harrison, solicitors, Leeds; and Mr. G. H. Belas, 66, Camden-street, Dublin.

MACHINERY AND ENGINES WANTED FOR ABROAD.—PARTIES having good and substantial NEW or SECOND-HAND MACHINERY and ENGINES, as mentioned below, may hear of a PURCHASER, by applying by letter, post-paid, to Mr. D. WILSON, care of Messrs. Gower and Co., LONDON.

One 50 or 60-horse power BLOWING-ENGINE, condensing or expansive, with two cylinders.
HOT-AIR BLAST and BLOWING APPARATUS, for one pair of furnaces, 14 feet in the boshes.
One SET of CYLINDERS and ROLLING-MILL, complete, with engine, shears, tilt-hammer—capable of turning out 100 tons of bar-iron a week.
Three 30 or 40-horse power CONDENSING WHIM-ENGINES, for winding-up coal.
Sixty underground COAL WAGGONS, or TRUCKS and KIBBLES.
Two BOILERS, for the blowing-engine.
One BOILER each for the other engines.
ALL these BOILERS to be FORMED and GOT READY for putting together, but to be delivered in plates, with the necessary rivets, and the same completed where desired to be used. 7

Parties having the above machinery, or any part thereof, or parties willing to supply the same new, are requested to furnish particulars, delivered at the nearest port for shipment.—Manufacturers willing to CONTRACT to SUPPLY the same, and erect them in the country, being answerable for their good performance for 12 months, under their own workmen, will have the preference.

Second-hand machinery will be submitted to the approval of an engineer, appointed for the purpose.—Further particulars to be obtained at the above address.

MINERAL FIELD IN MID-LOTHIAN.—TO BE LET, for such term of years as may be agreed on, the COAL, LIMESTONE, and IRONSTONE in the LANDS of DUDDINGSTONE and BRUNSTAIN, in the county of MID-LOTHIAN, the property of the Most Noble the Marquis of Abercorn.

The coals consist chiefly of what are termed the Edge Seams of Mid-Lothian, which are numerous, and of various thickness and quality—some of them containing Gas, or Parrot, Coal. There is also reason to expect, at Duddingstone, Black-band and Ironstone, such as have been found at Dryden and Gresnlaw, in the same range of coals; and Limestone has been worked on the estate. 8

The near vicinity of this coal-field to the city of Edinburgh and the town of Portobello, and the direct access by Railway to Edinburgh, as well as to the ports of Leith and Fisherrow, render it peculiarly advantageous for a colliery.

An engine-pit has been already sunk to a considerable depth at Magdalene-bridge, where it is understood to have reached within about 20 fathoms of the Jewel Coal; and an inclined plane mine, in one of the Edge Seams of Coal, has been extended to Joppa—in which mine coal-wall was prepared and ready to work; but both operations have been suspended since the death of the late tenant, and the pit and mine are thus at present filled with water; but the steam-engine and machinery, which were erected by the late tenant, are still on the property (and may be had at a valuation by a tenant), readily commanded the water when the works were in progress.

The collieries will be shown by Mr. Allan Livingstone, Joppa; and for particulars application may be made to Messrs. Bald and Geddes, mining engineers, 40, Albany-street, Edinburgh, with whom are the plans and sections of the coal-field.
Edinburgh, Feb., 1847.

ONE LARGE PUMPING-ENGINE.—TO BE SOLD, BY PRIVATE CONTRACT, at GODOLPHIN MINES, Helston, Cornwall, one 80-inch pumping-engine, 10 feet stroke in the cylinder, and 8 feet in the shaft, with three tubular boilers of about 25 tons; a balance-bob and top-piece of rod to each. This excellent engine was erected by one of the first engineers in the county; the air-pumps are lined with brass, and the whole of the machinery possesses great strength and durability. It has done a "duty" equal to the first in Cornwall, and is well worth the attention of any gentleman or company requiring such a powerful machine. The engine will be sold with or without the boilers, balance-bobs, &c., as may best suit the purchasers. 9

Application to be made to Capt. R. Williams, on the mines.
Dated Godolphin Mines, Helston, Cornwall, February 25, 1846.

COLLIERY FOR SALE, in the county of NORTHUMBERLAND.—FOR SALE, BY PRIVATE CONTRACT, with entry, either immediate, or as may be agreed upon, that current-going COLLIERY, called WEST CRAMLINGTON COLLIERY. The coals are certified as "Baddle's West Hartley," and are of the best steam quality: they have been tried, and being approved of, by the Admiralty authorities, are admitted into the Government, as well as the East India Company's, contracts for supplying coals for their steam-packets, &c. 10

The royalty immediately joins that whence the Original West Hartley Coals are worked, and as good prices are obtained as from any colliery producing steam coals.

For particulars apply to Mr. R. W. Swan, Percy Main Office, Quay, Newcastle; or to Mr. Thomas Taylor, at the colliery.
West Cramlington Colliery, Feb. 22, 1847.

COAL WAGGONS, &c., FOR SALE.—ABOUT ONE HUNDRED and FIFTY COAL WAGGONS, which have been rendered unserviceable by the alteration of the Kilmarnock and Troon Railway to an edge line. They are adapted for a tram railway, 4 feet 4½ inches wide; hold 30 cwts. each—are in good working order, and will be found very suitable for any private railway or service work; they could be shipped conveniently at Troon Harbour for any part of the kingdom. 11

A large quantity of TRAM RAILS, of cast-iron, 30 lbs. to 35 lbs. per yard, will BE DISPOSED OF, along with the waggons, if desired.

Apply to John Muir, Gatehead Colliery, Kilmarnock, N.B.

TO COAL AND IRONSTONE MASTERS.—TO BE LET, valuable MINES, lying under an estate situated at CHESTERTON, in the parish of Wolstanton, in the county of Stafford, consisting of about 63 acres, and containing all the COAL and IRONSTONE MINES in the North Staffordshire district. The estate adjoins the large collieries and iron-works at Apedale, which have been extensively worked for many years. Mr. George Rhead, the tenant, will show the premises. 12

For further particulars apply to Mr. George Mitcheson, mine surveyor, Longton, Staffordshire; or to Mr. Charles Eaton, Petersham, near Richmond, Surrey.

TO MINE SURVEYORS AND MINE AGENTS.— RULES, MINER'S COMPASS, AND QUADRANT.—Price, £9 19s. 6d.

This instrument is adapted to all cases of subterranean surveying. The circumferenter, with spirit level, and its usual appendages, may be used alone, when horizontal work only is required; and the quadrant may be attached thereto when shafts, winzes, or any inclined works are to be surveyed—the angles of which may be taken either by ascending or descending lines. Its simplicity recommends it to the practical miner, it being so constructed, that the results can be read off, and the calculations of underlie, &c., made in feet and inches, without the necessity of any reference to trigonometrical tables. 13

Made and sold only by W. Cary, opticion, 181, Strand, with description.

ASSAYING AND ANALYSIS.—Mr. MITCHELL begs to inform the MANAGERS, &c., of MINES, SMELTING-WORKS, and MANUFACTORIES, that he still continues to CONDUCT ASSAYS and ANALYSES of all PRODUCTS, metallurgical and manufacturing, at his LABORATORY,

23, *HAWLEY-ROAD, KENTISH TOWN, LONDON,* 14

to which address communications are to be forwarded.—Instructions in all branches of assaying and analysis as usual.

THE PATENT SAFETY FUSE, FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the SAFEST, CHEAPEST, and most EXPEDITIOUS MODE of effecting this very hazardous operation. From many testimonies to its exactness with which the manufacturers have been favoured from every part of the kingdom, they select the following letter, recently received from John Taylor, Esq., F.R.S., &c.:—"I am very glad to hear that my recommendations have been of any service to you; they have been given from a thorough conviction of the great usefulness of the Safety Fuse; and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, BICKFORD, SMITH, and DAVEY, Camborne, Cornwall. 15

THE GUTTA PERCHA COMPANY invite the attention of Engineers, Machinists, Millowners, &c. &c., to the PATENT GUTTA PERCHA DRIVING BANDS, which possess the valuable properties of great durability and strength, permanent contractility and uniformity of substance and thickness—thus avoiding all the irregularity of motion, occasioned by piecings and inequality of thickness in leather straps. They are not affected by oils, grease, acids, alkalies, water, &c.; and possess extraordinary facilities for being joined, and hung their work in a remarkable manner; and can be had of any width, substance, or length, without joints. 16

The company continues to receive most satisfactory testimonials of the superior quality of these Bands, which can be seen at the company's WORKS, WHARF-ROAD, CITY-ROAD, where all orders will receive immediate attention.
London, March 3, 1847. E. GRANVILLE, Manager.

PATENT GALVANISED IRON AND WIRE ROPE WORKS, *MILLWALL, POPLAR.*

ANDREW SMITH begs to inform the Mining, Railway, and Shipping interests, that he has obtained a PATENT for an IMPROVED METHOD of GALVANISING IRON, producing a much superior article at a considerable saving in cost—the improved process for galvanising wire rope, adding only £10 per ton instead of £30, under the ordinary processes. The rope is extensively used in damp situations, for mining and railway purposes, and for ships' standing rigging.—Mr. J. S. Tregellas, Truro, agent for Cornwall. 17

TO ENGINEERS, RAILWAY CONTRACTORS, MINING AGENTS, IRONMASTERS, AND OTHERS REQUIRING FINE GREASE for MACHINERY and AXLES of every description.—JOSEPH PERCIVAL'S IMPROVED ANTI-FRICTION GREASE is—after trials on machinery and axles of every kind where constant friction is kept up—admitted to be the most useful, economical, and best preparation of the kind ever offered to the public. 18

References to scientific and practical men can be given, and testimonials shown of its great excellence.—Samples forwarded on application at the manufactory, Green-street, Wellington-street, Blackfriars-road, London.

CHARCOAL PIG-IRON.—The Proprietor of MATERIALS for the MANUFACTURE of CHARCOAL PIG-IRON, in this country, fit for conversion into steel, of a quality equal to that made from the best foreign iron, and at a cost not exceeding that of common coke pig-iron, is desirous of meeting with a PARTY willing to EMBARK a SUM, not exceeding £20,000, in the business, on the condition of receiving half the profits.—Particulars may be learnt on application (from principals only) to "F. M.," No. 287, care of F. D. Lewis and Co., 3, Castle-court, Cornhill. 19

TO BE SOLD, THREE HUNDRED TONS ANTHRACITE PIG-IRON, No. 3, of Crane's make, now lying at Liverpool.—Apply to WILLIAM FOX & SON, 53, Castle-street, Liverpool. 20

TO BE SOLD—TWO HIGH-PRESSURE STEAM- ENGINES—one 40 and the other 30-horse power, calculated at 30 lbs. pressure. These engines are entirely new, and are very strongly built, having been intended for driving heavy machinery, and are not now required.

For particulars apply to Mr. Mathew Smith, 26, Button-lane, Sheffield. 21

FOR SALE, ONE (128th) SHARE in WHEAL METHA —Application to JAMES LANE, 75, Old Broad-street. 22

TO MINE AGENTS AND OTHERS.—The EAST CORN- WALL GUNPOWDER COMPANY are now MANUFACTURING BLASTING POWDER, of the best quality, and are prepared to SUPPLY it on the LOWEST TERMS.
Herodsfoot, Cornwall, 3d Mo. 1st, 1847. JOHN C. ISAAC, Secretary. 23

PIG-IRON.—JAMES BANKS AND CO. have always FOR SALE SCOTCH PIG-IRON, deliverable, free on board, at the Broomielaw, Port Dundas, Ardrossan, and in the Frith of Forth, at Charleston.
Glasgow, 21, Renfield-street. 24

WILSON & FRASER, 2, WELLINGTON-BUILDINGS, LIVERPOOL, and 13, EXCHANGE-PLACE, GLASGOW, have always ON SALE PIG-IRON, BAR-IRON, RAILWAY CHAIRS, and RAILWAY BARS. 25

WILLIAM H. SMITH, MINING SHARE AGENT, 10, *WARNFORD-COURT, THROGMORTON-STREET,* has SHARES FOR SALE in the following MINES—viz.: 26

WHEAL LOUISA,	ALBERT CONSOLS,
WHEAL BLENCOWE,	WEST SHEPHERD,
WHEAL MARY PENTUAN,	VICTORIA TIN MINING COMPANY.

*** Every information will be afforded on application.

MINING OFFICES, 1, *ST. MICHAEL'S-ALLEY, CORNHILL, LONDON.*

WATSON AND CUELL, MINE AGENTS. 27

N.B.—STATISTICAL INFORMATION furnished (on application) to SHAREHOLDERS in MINES in Cornwall, Devon, Scotland, Ireland, Wales, and Spain.

MESSRS. J. PAINTER AND CO, SHAREBROKERS, MINING AND GENERAL AGENTS, 28
25, *CASTLE-STREET, LIVERPOOL,*
AFFORD EVERY INFORMATION as to the STATE of the MARKETS, PRICES, upon application.

JONATHAN DAVEY, MINE AGENT, SURVEYOR, AND SHAREBROKER, 29
MATTHEW-STREET, TAVISTOCK.
Mines surveyed, inspected, and reported on, at the shortest notice; plans, sections, and dialling performed, by day or contract.

THOMAS P. THOMAS, MINE AGENT, AND DEALER IN RAILWAY AND OTHER SHARES. 30
18, *THREADNEEDLE-STREET, LONDON.*

MR. R. TREDINNICK, MINING AGENT AND DEALER IN EVERY DESCRIPTION OF SHARES. 31
THREE KING'S COURT, LOMBARD-STREET, LONDON.

MESSRS. LINTHORNE, JONES, AND CO., STOCK, MINING, AND SHARE AGENTS, 32
*** Every information will be afforded as to the markets and prices of the above, by application (post-paid) at their offices,
48, *THREADNEEDLE-STREET, LONDON.*

MESSRS. R. CLARK & CO. beg to acquaint their friends and the public in general, that they have taken OFFICES as below, where they intend to carry on BUSINESS as STOCK, SHARE, and MINING AGENTS; relying with confidence upon the method adopted by them for conducting all business entrusted to their agency, Messrs. R. C. & Co. solicit a continuance of that support it will be, by strictest attention to all orders, their endeavour to deserve.

N.B.—Money advanced upon scrip and other securities. 33
3, Austinfriars, Broad-street, Oct. 17, 1846.

JAMES LANE, MINING SHARE DEALER, 34
75, *OLD BROAD-STREET, LONDON.*

NATIONAL BRAZILIAN MINING ASSOCIATION.—Notice is hereby given, that, after TUESDAY next, the 9th of March, NO MONEY will be RECEIVED on account of the INSTALMENT of ONE POUND per share on the MARKED SHARES and SCRIP, due on the 18th ult. By order of the board, 35
26, Throgmorton-street, March 3, 1847. R. IRELAND, Secretary.

NATIONAL BRAZILIAN MINING ASSOCIATION.—A SPECIAL MEETING of the shareholders of this association will be HELD on Monday next, at One o'clock precisely, for the purpose of confirming the election of Wm. Rickford Collett, Esq., M.P., and of electing another director, in the room of John Irving, Esq., M.P. By order of the board, 36
26, Throgmorton-street, March 3, 1847. R. IRELAND, Secretary.

LAMHEROOE WHEAL MARIA MINING COMPANY.
London, March 4, 1847.

G. W. SNELL, Esq., Callington, Cornwall;
Purser of Lamheroe Wheal Maria.

SIR,—We, the undersigned adventurers in Lamheroe Wheal Maria, hereby request you to CONVENE a Special General Meeting of the adventurers in the mine, to be held at the office of the secretary, James Crofts, Esq., 4, King-street, Cheapside, London, on Thursday, the 18th inst., at Two o'clock precisely, for the consideration of various questions relative to the purserahip of the mine, and on other important business.

We are, Sir, your obedient servants,
PETER DAVEY—109 shares.
JOHN ADDIS—95 ditto. 37
CHARLES HILL—40 ditto.
THOMAS DUNNAGE—10 ditto,
JAMES CROFTS—30 ditto.
HENRY CRIGHTON—10 ditto.

Callington, Cornwall, March 6, 1847.

TO THE ADVENTURERS, OR SHAREHOLDERS, IN LAMHEROOE WHEAL MARIA MINE.

In pursuance of the above Requisition, I do hereby CALL a SPECIAL GENERAL MEETING, to be HELD, in accordance with the same, at the office of the secretary, James Crofts, Esq., 4, King-street, Cheapside, London, on Thursday, the 18th March inst., at Two o'clock precisely, for the consideration of various questions relative to the purserahip of the mine, and on other important business. G. W. SNELL, Purser.

PENNANT LEAD AND COPPER MINING COMPANY. —NOTICE.—The directors of the PENNANT LEAD AND COPPER MINING COMPANY hereby give Notice, that the shareholders, by an unanimous vote, have resolved to REDUCE the NUMBER of PARTS, or SHARES, of this association, from 6000 to 4000; and that, henceforth, all transfers and other documents will be altered accordingly.—4, Salisbury-street, Strand, Feb. 16, 1847. J. C. RIDGWAY, Chairman. 38

WHEAL MARY UNITED MINING COMPANY, In 1000 shares, of £10 each. 39
ON THE COST-BOOK PRINCIPLE.

The PROSPECTUS may be obtained of the London secretary, Mr. W. Witcomb, 167, Fleet-street, London.—Office entrance; second door on the left, up Johnson's-court, where the Cost-book will remain during the week for signature.

WYLD'S POPULAR ATLAS OF THE WORLD: consisting of detailed MAPS of the different parts of the GLOBE.—To be completed in 24 monthly parts, each containing TWO MAPS, illustrated by geographical and statistical descriptions. Edited by JAMES WYLD, Geographist to the Queen and his Royal Highness Prince Albert. A Number is published the 27th of each month (size 23 inches by 26 inches), price 1s. 6d. plain, 2s. 6d. coloured.

James Wyld, Charing-cross East, four doors from Trafalgar-square, and 40
2, Royal Exchange.

THE LATE WILLIAM COBBETT, M.P., in his *Register* for June, 1832, there depicted the sufferings he had endured for 22 years, from the want of a perfect TRUSS; and, having obtained one from Mr. COLES, was instrumental in inducing thousands of persons of rank and fortune to apply to him for relief—whose patent has baffled every attempt to improve them for 27 years past.

*** "COLES'S PATENT, 3, CHARING-CROSS," is marked upon all his Trusses. 41

Just published, Part I.,

COMBUSTION of COAL, CHEMICALLY & PRACTICALLY CONSIDERED. With coloured plates.
By CHARLES WYE WILLIAMS, Esq. 42
London: Simpkin, Marshall, & Co., and J. Weale—*Birmingham:* Wrightson & Webb.

PATENT IMPROVEMENTS IN CHRONOMETERS, WATCHES, AND CLOCKS.—E. J. DENT, 82, Strand, and 33, Cockspur-street, watch and clock maker, BY APPOINTMENT, to the Queen and his Royal Highness Prince Albert, begs to acquaint the public, that the manufacture of his chronometers, watches, and clocks, is secured by three separate patents, respectively granted in 1836, 1840, 1842. Silver lever watches, jewelled in four holes, 6 gs. each; in gold cases, from £8 to £10 extra. Gold horizontal watches, with gold dials, from 8 gs. to 12 gs. each. 43
DENT'S PATENT DIPLIEDOSCOPE, or meridian instrument, is now ready for delivery. Pamphlets containing a description and directions for its use 1s. each, but to customers gratis.

NATIONAL LOAN FUND LIFE ASSURANCE SOCIETY.
26, *CORNHILL, LONDON.*
Capital £300,000.—Empowered by Act of Parliament.
This institution embraces important and substantial advantages with respect to Life Assurances and Deferred Annuities. The assured has, on all occasions, the power to borrow, without expense or forfeiture of the policy, two-thirds of the premiums paid (see table); also the option of selecting benefits, and the conversion of his interests to meet other conveniences or necessity.
Assurances for terms of years are granted on the lowest possible rates. 44
DIVISION OF PROFITS.
The remarkable success and increasing prosperity of the society has enabled the directors, at the last annual investigation, to declare a fourth bonus, varying from 35 to 85 per cent. on the premiums paid on each policy effected on the profit scale.
EXAMPLES.

Age.	Sum.	Prem.	Year.	Bonus added.	Bonus in Cash.	Permanent reduction of Premium.	Assured may Borrow.
60	£1000	£0 3 4	1837	£217 15 1	£109 0 11	£16 0 4	£445 0 0
			1838	192 3 0	87 1 4	13 10 2	395 11 1
			1839	165 11 10	74 1 9	11 3 1	346 2 3
			1840	116 7 6	54 0 10	7 18 10	296 13 4
			1841	111 6 8	49 10 0	7 10 4	247 4 5

The division of profits is annual, and the next will be made in December of the present year. F. FERGUSON CAMROUX, Secretary.

NO BREWING UTENSILS REQUIRED.
PATENT CONCENTRATED MALT AND HOP EXTRACT enables PRIVATE INDIVIDUALS to MAKE
FINE HOME-BREWED ALE,
WITHOUT EMPLOYING ANY BREWING UTENSILS.—It has only to be dissolved in hot-water and fermented.—Sold, in jars, for medicinal and other purposes, at 1s. and 1s. 6d.; and in bottles for brewing 9 to 18 gallons and upwards of ale, at 6s. 6d. and 12s. 6d. each, by the 45
BRITISH NATIONAL MALT EXTRACT COMPANY,
7, NICHOLAS-LANE, LOMBARD-STREET; Petty, Wood, and Co., 53, Threadneedle-street; Wix and Sons, 22, Leadenhall-street; Batty and Co., 15, Finsbury-pavement; De Castro and Peach, 68, Piccadilly; Hockin and Co., 38, Duke-street, Manchester-square; and oilmen and grocers generally.
Also, just published, and may be had gratis,
NATIONAL BREWING: A GUIDE to the USE of CONCENTRATED MALT AND HOP EXTRACT, for BREWING and WINE MAKING; to which is added, MEDICAL OPINIONS relative to the virtues of malt and hops.

Copy of a Letter from "COLONEL HAWKER" (the well-known author on "GUNS AND SHOOTING")
Longparish House, near Whitchurch, Hants, Oct. 21, 1846.
SIR,—I cannot resist informing you of the extraordinary effect that I have experienced by taking only a few of your LOZENGES. I had a cough, for several weeks, that defied all that had been prescribed for me; and yet I got completely rid of it by taking about half a small box of your Lozenges, which I find are the only ones that relieve the cough without deranging the stomach or digestive organs.—I am, Sir, your humble servant,
To Mr. Keating, &c., 79, St. Paul's Churchyard. P. HAWKER.

KEATING'S COUGH LOZENGES are PATRONISED also by his Majesty the King of Prussia, his Majesty the King of Hanover, and most of the Nobility and Clergy of the United Kingdom, and are especially recommended by the Faculty. 46
RECENT TESTIMONIAL.
DEAR SIR,—Having been, for a considerable time during the winter, afflicted with a violent cough, particularly at lying down in bed, which continued for several hours incessantly, and after trying many medicines without the slightest effect, I was induced to try your Lozenges; and, by taking about half a box of them, in less than 24 hours, the cough entirely left me, and I have been perfectly free from it ever since.
9, Claremont-terrace, Pentonville, I am, dear Sir, yours, very respectfully,
Feb. 17, 1845. JAMES ELLIS,
MR. KEATING. (Late proprietor of the Chapter Coffee-house, St Paul's.)
Prepared and sold in boxes, 1s. 1½d., and tins, 2s. 9d., 4s. 6d., and 10s. 6d. each, by T. Keating, chemist, &c., No. 79, St. Paul's Churchyard, London; and retail by all druggists and patent medicine venders in the kingdom.
N.B.—To prevent spurious imitations please to observe that the words "KEATING'S COUGH LOZENGES" are engraven on the Government stamp of each box.
NOTICE.—These Lozenges contain no opium, or any preparation of that drug.

ON NERVOUS DEBILITY & GENERATIVE DISEASES.—Just published, the Thirtieth Thousand, an improved edition, revised and corrected, 120 pages, price 2s., in a sealed envelope, or forwarded, post-paid, to any address, secure from observation, for 2s. 6d., in postage stamps, illustrated with numerous anatomical coloured engravings, "MANHOOD: the Causes of its Premature Decline, with Plain Directions for its Perfect Restoration." A medical essay on those diseases of the generative organs, emanating from solitary and sedentary habits, indiscriminate excesses, the effects of climate, and infection, &c., addressed to the sufferer in Youth, Manhood, and Old Age; with practical remarks on marriage—the treatment and care of nervous and mental debility, impotency, syphilis, and other urino-genital diseases, by which even the most shattered constitution may be restored, and reach the full period of life allotted to man. The whole illustrated with numerous anatomical engravings on steel, in colour, explaining the various functions, secretions, and structures of the reproductive organs in health and disease; with instructions for private correspondence, cases, &c. 47
By J. L. CURTIS and CO., Consulting Surgeons, 7, Frith-street, Soho-square, London.
REVIEWS OF THE WORK:—"'Manhood:' a medical work. To the gay and thoughtless we trust this little work will serve as a beacon to warn them of the danger attendant upon the too rash indulgence of their passions, whilst to some it may serve as a monitor in the hour of temptation, and to the afflicted as a sure guide to health."—*Chronicle.* "We feel no hesitation in saying, that there is no member of society by whom the book will not be found useful—whether such person hold the relation of a parent, a preceptor, or a clergyman."—*Sun, Evening Paper.* "Curtis on Manhood should be in the hands of youth and old age. It is a medical publication, ably written, and developes the treatment of a class of painful maladies which has too long been the prey of the illiterate and the designing."—*United Service Gazette.*
Published by the authors, and may be had at their residence; sold also by Strange, 21, Paternoster-row; Hannay, 63, Oxford-street; Mann, 39, Cornhill, London; Sowler, 4, St. Ann's-square, Manchester; Philip, South Castle-street, Liverpool: Campbell, 146, Argyle-street, Glasgow; Robinson, 11, Greenside-street, Edinburgh; and, in a sealed envelope, by all booksellers.—Messrs. Curtis and Co. are to be consulted daily at their residence, No. 7, Frith-street, Soho-square, London; and patients can have this work privately forwarded them, by initial or otherwise, to any part of the United Kingdom, direct from the authors' residence; or from any of the above agents, on remitting 2s. 6d. in postage stamps.

ON THE SECRET INFIRMITIES OF YOUTH AND MATURITY,
With 25 coloured engravings.
Just published, sixteenth thousand (in a sealed envelope), price 2s. 6d.; or post-paid to any address, for 3s. 6d., in postage stamps, or Post-office order,
SELF-PRESERVATION: A Medical Treatise, on Marriage, and on the Secret Infirmities and Disorders of Youth and Maturity. Illustrated with 25 coloured plates on the anatomy, physiology, and diseases of the urinary and reproductive organs, explaining their various structures, uses, and functions, and the injuries that are produced in them, by solitary habits and other excesses. With practical observations on the treatment of nervous debility, local and constitutional weakness, syphilis, stricture, and other diseases of the urethra. By SAMUEL LA'MERT, consulting surgeon, 9, Bedford-street, Bedford-square, London, Matriculated Member of the University of Edinburgh, Honorary Member of the London Hospital Medical Society, Licentiate of Apothecaries Hall, London, &c. REVIEWS OF THE WORK. 48
"The author of this singular and talented work is a legally qualified medical man, and has evidently had considerable experience in the treatment of the various disorders, arising from the follies and frailties of early indiscretion. The engravings are an invaleable addition, by demonstrating the consequences of excesses, which must act as a salutary warning to youth and maturity, and by its perusal, many questions may be satisfactorily replied to, that admit of no appeal, even to the most confidential friend."—*Era.*
Published by the author; and may be had at his residence; also from S. Gilbert, 32, Paternoster-row; Hannay and Co., 63, Oxford-street; Starie, 23, Tichborne-street, Quadrant; Gordon, 146, Leadenhall-street, London; Newton, 16, Church-street, Liverpool; and all booksellers.
At home for consultation daily, from nine till two, and from five till eight; and all letters, immediately replied to, if containing the fee of £1, for advice, &c.—9, Bedford-street, Bedford-square, London.

The Nineteenth Edition, price 2s. 6d.; free by post, 3s. 6d.
THE SILENT FRIEND: a medical work, on the concealed cause of constitutional or acquired debility, loss of muscular energy, and derangement of the generative system, nervous debility, constitutional weakness, excessive indulgence, &c.; with Observations on Marriage, &c. By R. and L. PERRY and Co., surgeons, London. Published by the authors, and sold at their residence; also by Strange, 21, Paternoster-row; Hannay & Co., 63, Oxford-street; Noble, 109, Chancery-lane, Gordon 146, Leadenhall-street; Purkiss, Compton-street, Soho, London.
Part I. of this work is addressed to those who are prevented from forming a matrimonial alliance, and will be found an available introduction to the means of perfect and secret restoration to manhood.—Part II. treats upon those forms of diseases, either in their primary or secondary state, arising from infection—showing how numbers neglect to obtain competent medical aid, entail upon themselves years of misery and suffering. 49
The CORDIAL BALM of SYRIACUM is a stimulant and renovator in all cases of constitutional or acquired debility; by its use the whole system becomes restored to a healthy state of organisation. Sold in bottles, price 11s. and 33s.
THE CONCENTRATED DETERSIVE ESSENCE.—An anti-syphilitic remedy for searching out and purifying the blood from venereal contamination, scurvy, blotches on the head, face, and body, ulcerations, and those painful affections arising from improper treatment, or the effects of mercury, or secondary symptoms. Price 11s. and 33s. per bottle; also £5 cases.
PERRY'S PURIFYING SPECIFIC PILLS are perfectly free from mercury, capsiva, and other deleterious drugs, and may be taken with safety without interference with or loss of time from business, and may be relied upon in every instance. Sold in boxes, at 2s. 9d., 4s. 6d., and 11s. each, by all medicine vendors—of whom may be had the *Silent Friend*.—Messrs. R. and L. Perry and Co. may be consulted at No. 19, Berners-street, Oxford-street, London, daily.

STEAM TO INDIA VIA EGYPT, MALTA, ITALY, ALEXANDRIA, AND THE PENINSULAR PORTS.
PASSAGE TO BOMBAY, MADRAS, AND CALCUTTA.
The Peninsular and Oriental Steam Navigation Company BOOK PASSENGERS for CEYLON, MADRAS, and CALCUTTA direct, by steamers leaving Southampton on the 20th, and for Alexandria, *en route* to Bombay, on the 1st of every month.
A steamer from Southampton leaves the 1st and 20th of every month for Malta, where are steamers to Naples, Genoa, Civeta Vecchia, three times a month. 50
STEAM TO CORUNNA, OPORTO, VIGO, LISBON, CADIZ, AND GIBRALTAR.
A steamer leaves Southampton on the 7th, 17th, and 27th of every month.
Apply at the Peninsular and Oriental Steam Navigation Company's offices, 51, St. Mary Axe, London, where only passages can be secured throughout.

OFFICE FOR PATENTS, 7, STAPLE INN, HOLBORN.
J. MURDOCH (successor and late assistant to Mr. Hebert)
Informs INVENTORS and PATENTEES, that, at his OFFICE, they can obtain 51
REFERENCE TO A CLASSIFIED LIST OF PATENTS,
(THE ONLY ONE EXTANT), which shows at one view all the Patents ever granted for any particular object, whereby they may save much trouble and expense, and procure information not otherwise obtainable. BRITISH and FOREIGN PATENTS OBTAINED, and USEFUL and ORNAMENTAL DESIGNS REGISTERED.
SPECIFICATIONS carefully prepared, and REPORTS of ENROLLED SPECIFICATIONS furnished on moderate terms.
FINISHED and WORKING DRAWINGS executed with accuracy and dispatch.

IMPORTANT TO RAILWAY COMPANIES.
PATENT KAMPTULICON COMPANY, 18, CORNHILL. 52
This company having completed their new factory, are prepared to supply railway managers and contractors with an elastic material (perfectly non-absorbent) to place between the rails and sleepers, and between the frames and bodies of carriages, to prevent jarring, and, consequently, wear and tear. The elastic planking is strongly recommended to be used for the backs and sides of carriages, to prevent splinters when accidents occur.
By order of the board, P. G. GREVILLE, Secretary.

LITERARY NOTICES.

Observations on Steam-Ships, and the Use of Iron in their Construction; its Superiority being Evidenced in the Cases of the Nemesis *and* Ariadne, *off the Cape of Good Hope and in the China Seas.* By C. N. NIXON, late of the Indian Navy. Effingham Wilson, Royal Exchange, London.

The use of iron in shipbuilding now rapidly extending, forming as it does a question of much controversy in the maritime world, the author of these "observations" has come forward most opportunely with facts and historical data of the above vessels, gleaned from actual experience, which show, most convincingly, we should think, even to those whose predilections are in favour of ancient customs, the vast superiority of iron over wood for shipbuilding, in every point of view. After alluding to the present critical position of affairs throughout the world, and the necessity of augmenting and improving our Navy, he observes that wood and iron vessels may both be useful in their way—the wooden being, perhaps, better adapted for towing and sailing on the high seas, and iron for the transport and disembarkation of troops, from their lighter draught of water; he then instances that, at the taking of Woosung, a *small* iron steamer landed 1100 men in two trips, in a very short time, being able to approach close to the shore, drawing only about 4½ feet of water. At Nankin, the *Nemesis* was able to land at one time not less than 1000 men, and could have carried 150 more; and at Canton, the 49th Regiment, after being conveyed some distance, was landed from her decks at Tsingpoo, and walked directly ashore without boats, or causing any delay whatever. After alluding to the general superiority of the merchant vessels over those of the Royal Navy, he proceeds, by numerous facts, to prove the superiority of iron, fairly acknowledging the disadvantages attendant thereon—such as corrosion, the adhesion of barnacles, weeds, &c.; and suggests remedial measures, more particularly the plan proposed by Mr. Walter of coppering iron-vessels by means of the "kamptulicon." The whole 30 pages of this pamphlet will be read with pleasure, which shows that the author possesses considerable naval experience, and has the superiority of the Navy sincerely at heart.

Emigration: A more Humane and Profitable Test of Destitution than the Workhouse. Effingham Wilson, Royal Exchange, London.

The pamphlet before us is intended to call the attention of the public to the awful destitution which at present exists, especially in Ireland, and suggesting remedial measures for the relief of the population, more particularly with the view of encouraging emigration on a large scale, which he endeavours to show would cost by far less than what will be required to keep them from starving here. We give the following extract from his preface, and recommend the tract for perusal to all who feel interested in the well-being of Ireland:—"The state of Ireland may be compared to a tangled skein of thread. It is the pressure of the different parts against each other that prevents its being wound off and made serviceable. Open the skein, remove this pressure, and a little patience will do the rest. The simile may be carried further. The short lengths which may be drawn from the skein in its tangled state, will represent the different causes of the distress as seized upon by different persons—thus, absenteeism, improvidence of the people, the union with Great Britain, want of change in the grand jury laws, small holdings, middle-men, wholesale clearances, long leasehold tenures, tenant rights, encumbered estates, &c., &c., &c., are all part and parcel of the skein; but the more each single part is pulled, the worse the tangle; yet, when the skein is at length wound off, no one can discover the part at which he had so pertinaciously tugged. One of *Æsop's Fables* represents the mouse as freeing the lion from the toils in which it had become entangled. If the writer has nibbled through but one mesh, he retreats contented to his original obscurity."

Administration of the Affairs of the Dutch-Rhenish Railway Company. By a SHAREHOLDER. Effingham Wilson, Royal Exchange, London.

This is a complete history of the proceedings of the Dutch-Rhenish Railway Company from the commencement, and is evidently written by one eminently calculated to lay the true state of affairs before the public. It is, however, merely of interest to those immediately concerned in the company, and to whose perusal we most especially direct it.

PATENT METAL-CORED RAILWAY SLEEPER COMPANY.—Since the establishment of the Liverpool and Manchester Railway, no material improvement has been made in the sleepers on which the rails are laid, although the attention of engineers has been turned to every other detail in the system; and this is the more surprising, as stone blocks, having been found too rigid, were obliged to be replaced with wooden sleepers, since which scarcely an alteration of any moment has been effected. When we consider the vast improvements made in the locomotive engines, carriages, signals, stations, and every other branch of railway propulsion, and the unstable and variable nature of the wooden sleeper, it certainly becomes a matter of astonishment that experiments have not before been made for the discovery of a sleeper which—while it combined a necessary elasticity and sufficient rigidity without causing vibration, with very far greater durability than wood can ever attain—would secure safety, and occasion much greater economy in the wear and tear. These desiderata have, we believe, in a great measure, been secured by a new kind of sleeper, patented by Mr. J. Orsi, and for the carrying out of which the above company is formed. The invention consists in a wrought-iron core, of common dimensions, with the chairs keyed to it, imbedded in a solid mass of a bituminous cement—the iron is thus prevented from coming in contact with either air or water, and, consequently, not liable to injury. This bituminous cement being moulded in a trough, may be had to any form, either where an increased bearing is required, or otherwise. The advantage claimed by the patentee for the chairs is, that they cannot become loose; the bearing surface being exactly alike in all the sleepers, it follows that the rails rest upon an equal and homogeneous base, possessing a like degree of elasticity—and noise and shaking of the train thus avoided; the chairs forming part of the sleeper, and being already keyed to the gauge, the saving in laying will be very great, as it is only necessary to lay them at uniform distances, and key the rails in; great economy in first cost, and wear and tear, and consequently a great saving in cost of maintenance of way. The capital of this company is 100,000*l.*, in 10,000 shares, of 10*l.* per share; and we understand they have been for 10 months successfully tried on the London and North Western line; and orders are now on hand for supplying other lines in various parts of the kingdom.

IMPORTANT TO MINING ADVENTURERS, BUILDERS, AND OTHERS.—A memorial has lately been sent to the Board of Customs, stating that the consumers of Norway timber, in Devon and Cornwall, have been for some years charged with 20 per cent. more in quantity than the crown receives duty for, and that the officers have assisted in this deception by marking these false quantities on the pieces of timber. It appears, however, from a communication we have received, that the memorialist has been misinformed as to the practice of the officers, who have not so marked the timber, nor taken any part in so marking it; but the Commissioners of Customs have directed that the quantity charged with duty shall be marked by the officers on each piece in future; and, consequently, the consumer can now protect himself, and see that he has the quantity he pays for.

EXTRAORDINARY EFFECT ON LIVER AND STOMACH COMPLAINTS BY HOLLOWAY'S PILLS.—Extract of a letter, dated No. 30, Princes-street, Glasgow, Feb. 18, 1847:—"Professor Holloway. Sir,—I have taken your pills for a disease of the liver and stomach, from which I had long suffered. When I commenced the use of them I was in a most wretched condition—and, humanly speaking, they have saved my life. I had consulted many medical men to no purpose. I am now perfectly restored to health—to the surprise of all who witnessed the state to which I had been reduced by the disease affecting the liver and stomach. (Signed) CHARLES WILSON."—Sold by all druggists, and at Professor Holloway's establishment, 244, Strand, London. 53

GORDON'S FUMIFIC IMPELLER.

We some time since noticed this novel mode of naval propulsion, in which the inventor, Mr. Alexander Gordon, M.I.C.E., has applied the products of combustion from a close vessel, and, projecting from a pipe carried to the stem of the vessel, and impinging on the water, forces the boat forward. It will be, perhaps, here sufficient to notice, that in the steam-engine the power of combustion is not directly applied to the object required, but to the generation—while in this case the first power is the moving force, and the rocket is taken for its guide. Since our last description of this apparatus, the author has endeavoured to arrive at the true results which could be obtained by this application to steam navigation, by actual experiment—as contained in a pamphlet, entitled *Results of Experiments made with the Fumific Impeller, tending to Supersede the Steam-Engine for Navigation*, by ALEXANDER GORDON; London: Effingham Wilson, Royal Exchange. Mr. Gordon first constructed a small model boat with a brass rocket case in the keel, the boat displaced 15 lbs. of water, and a common 1 oz. rocket inflamed under water impelled her 30 ft. in four seconds, or at a rate rather more than five miles per hour. Being himself thus satisfied, although, to use his own words, "he had every difficulty in convincing steam-engine men that heat is in both cases the *source* of power," he proceeded to demonstrate the fact on a sufficiently large scale. In a boat 26 ft. long, and 4½ ft. broad, he fitted a close furnace or retort, and a common forge bellows, the furnace open at top and bottom, while an intense heat was got up, the bonnets were then luted air-tight, the upper part of the bellows was not used, and the boat displaced 4375 lbs. of water, when the discharge pipe at the stem was immersed 12 in. Each stroke of the bellows, by introducing oxygen into the furnace, sent an *instantaneous* rush of the products of combustion from the end of the discharge pipe, 3 in. diameter, at a temperature of 800° or 900° Fahrenheit. There being, of course, a valve in the discharge-pipe, a succession of blasts was sent into the bottom of the furnace, and the first blast always started the boat from a state of rest 3 ft. in two seconds; and the inventor states, that no two men, with all the advantage of their flexor and extensor muscles, could do more; and neither paddle-wheels or the screw can start the same weight into such motion in the same time. These experiments were often repeated, upon what may be termed the initial velocity had by the first blast or jet, but as they were made in an old leaky boat, the rate, consumption, and line of haulage, could not be taken. These latter points will be more fully illustrated on the construction of a larger vessel, fitted with several close furnaces and blowers, either worked by steam-engine, or kept in motion by the power of the vessel's own velocity. The inventor considers, however, that enough has been done to show the value of the discharge proposed, and that the fire, and one man blowing air, has done the work of two men—from which it follows, that suitable close furnaces, blown by a 50-horse power engine, will do the work of 100 horses, in impelling vessels, and so on in proportion. We shall be happy to hear of the completion of Mr. Gordon's new boat, and shall watch with interest his further experiments.

RAILWAYS IN IRELAND—THE BARROW VIADUCT.

On Tuesday last, the viaduct over the River Barrow, on the line of the Great Southern and Western Railway, at Monastereven, was opened for the passage of engines and waggons along the line. It is nearly 500 feet in length, and consists of a malleable iron framework resting on 10 slight stone piers; the width between the parapets is 25 feet, and has altogether an extremely light appearance. It is the fourth bridge of the kind which has been constructed by Sir John Macneill; and, as far as we can judge, is likely to supersede every other, where lightness, strength, and rigidity, combined with cheapness of construction, and considerable spans, are required. On Tuesday, there were two engines and tenders, and 23 waggons, heavily loaded with rails, and other materials, on the bridge at one time, when the weight on one opening could not have been less than 150 tons, at which time the deflection, measured by a steel wire standard, did not exceed one-eighth of an inch. The following description of this interesting structure has been obligingly forwarded to us by Mr. Bourns, the resident engineer, under whose immediate superintendence it was erected, by Messrs. Courtney and Stevens, of Blackhall-place, Dublin, who, we understand, have received the warmest approbation from Sir John Macneill, for the excellent workmanship and labour they have bestowed on this novel structure:—The lattice bridge across the Barrow, at Monastereven, is about 490 ft. long, and 25 ft. wide, being supported by 10 piers 4 ft. wide each, the spans between the piers being 50 ft. each. It is formed of four continuous internal lattice beams, which support the roadway—one rail being placed over each of these beams, and two internal lattice beams, which support the end of flooring, and form the hand-rail. The internal beams extend about 20 ft. at each end over the abutments, tapering from 7 ft. over the piers to 6 in. at the point. The bottom rails of these extensions pass under rollers, which are secured to heavy stones in the abutments, which allow the rail to expand or contract, but prevent the points from rising. The internal beams are 7 ft. deep, and are formed of two angle irons at top, and two at bottom; these are connected by lattice bars, the opens of the lattices being 2 ft. 3 in. apart; the lattice bars are rivetted between the angle bars both at bottom and top, with ⅞-in. rivets. The same size rivet is also used in the crossing of lattice bars; the angle irons are 5 in. × 3 in. × ½ in. thick; the lattice bars 3½ × ½ in.; in the bottom line of angle iron, the base of the angle iron is undermost, thus exposing the greater surface to the extreme tension. In the upper line of angle iron, the base of angle iron is uppermost, and on which the cross planking rests; to these beams there are diagonal braces of 6 × ½ in., rivetted on at each side; they are horizontal over the piers, but pass diagonally from the top of the lattices over the piers to the bottom of the lattice in the centre of opens; these braces are rivetted to the lattice bars when they cross them. The outside lattice beams are 11 ft. deep, having a bar of angle iron 2½ × ½ in. at botton on the inside; a bar of angle iron at level of top of the internal beams, to receive the end of cross planking, and two at top, one inside, and one outside; on the top of these a bar of gunwale-iron is placed, which forms the hand-rail; there are also three longitudinal belts of 6 × ½ in., rivetted outside the lattice bars. The six lattice beams are connected by cross latticing of two over each pier, and three between each pair of piers—the cross lattices are formed by two bars of angle iron crossing the bridges—one over and one under the lattice beams, and to which they are rivetted in the same line—there are also bars of angle iron rivetted perpendicularly to the lattice beams—the cross latticing is rivetted to the top and bottom angle irons, and also to the perpendicular angle iron, where the cross lattice bars pass through the internal beams; the cross lattice bars are 2½ × ½ in. The bridge is floored across with red pine planking 3 in. thick—on this is laid longitudinal baulks 12 in. × 6 in., placed over each internal beam, on which baulks the rails are bolted. There are only 200 tons weight of iron in the whole bridge, and about 60,000 rivets. The expansion of the 500 ft. was ½ in., with a variation of 17° of temp.; and it was satisfactory to observe, that the expansion was equal at each end.—*Irish Railway Gazette.*

PATENT HYDRO-PNEUMATIC PUMP.—A patent has been obtained by Mr. C. Tetley, of Bradford, Yorkshire, for a machine for raising water on an entire new principle, by which it is stated, that a greater amount can be lifted than by any of the present known methods; the principle is simple, on the basis of the natural law, that a body of compressed air, acting on the surface of a column of water in the short end of a bent tube, will raise such column to a height proportionate to the density of the air so compressed. A description of the apparatus is as follows:—A case, or chest, resembling a cheese, is fixed vertically in the water to be raised, with the water-mark above its centre, in the bottom of which is inserted the short bent end of a tube, of the necessary diameter, the other end of which is carried up to the spot where the water is to be delivered; within this case is a hollow axle running through its centre, open at the ends to freely admit the water, and having at its centre six or eight hollow arms terminating in leather tubes, so constructed, that when the pressure of the water is off them, they close so as not to admit air, but when each tube becomes perpendicular, with its mouth downwards, it immediately delivers the water into the iron case. On commencing to work this machine, an air-pump is placed in connection with the upper part of the case, and the air therein compressed to any density necessary to carry the water to a given height. The constant compression of this air will, without continuously working the air-pump, keep the water overflowing the necessary elevation; the hollow wheel being kept in rapid rotation, the water is carried through the hollow axle, and, by centrifugal force, is ejected into the lower part of the case, in which the compressed air keeps the water at one level, and, consequently, whatever quantity may flow through the wheel, will be forced up the tube in a continual stream.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY.

TO THE DIRECTORS
OF THE BIRMINGHAM AND OXFORD JUNCTION RAILWAY.

WE, the undersigned, being shareholders in the Birmingham and Oxford Junction Railway Company, holding, in the aggregate, more than 5000 shares (that is to say, more than 1-10th part of the capital), therein do, by this writing, under our hands, require you forthwith to call an extraordinary general meeting of the shareholders of the said company for the following objects or purposes—that is to say, for the purpose of considering the propriety of, and if so determined, for the purpose of taking the necessary steps at such meeting for increasing the number of the directors of the said company, by the election, if so thought fit, of six new directors, in addition to the existing directors of the said company; and if so thought fit, of proceeding, at such meeting, to elect such new directors accordingly; and in case of such election, of determining the order of rotation in which such new directors shall go out of office, and what number shall be a quorum at meetings of the directors of the said company; and also for the purpose of considering the provisions of a bill, entitled, "A proposed Bill for uniting the Birmingham and Oxford Junction Railway Company, and the Birmingham, Wolverhampton, and Dudley Railway Company, into one company; and for authorising the sale of the Birmingham, Wolverhampton, and Dudley Railway, and other new works, to the Great Western Railway Company," deposited in the month of December last, in the Private Bill Office of the House of Commons, and of considering and determining upon the propriety of introducing into Parliament, or of proceeding with or withdrawing the said Bill; and, if thought fit, of taking such steps for proceeding with, or withdrawing, the said Bill—and passing such resolutions, and giving such instructions to the directors of the said Birmingham and Oxford Junction Railway, touching any sale or other disposition of the said Birmingham and Oxford Junction Railway, or for the effecting any of the above-mentioned purposes, as the said meeting may think expedient.—Witness our hands, this 22d day of January, 1847.

E. J. MOZLEY, Liverpool
CHAS. MOZLEY, Liverpool
C. H. JONES. Liverpool
ELEANOR JOSEPH, Liverpool
ELIZABETH JOSEPH, Liverpool
SARAH JOSEPH, Liverpool
WM. REYNOLDS, Jun., Liverpool
THOS. GOODIER, Liverpool
P. HITCHMOUGH, Liverpool
R. J. KING, Liverpool
THOS. KINNERSLEY, Liverpool
J. J. FARREN, Yardley, Worcestershire
J. STUBBS, Liverpool
E. T. GREAVES, Birmingham
G. E. MARSDEN, Manchester
E. LICHFIELD, Liverpool
JOHN D. BURTON, Manchester
WM. J. BEALE, Birmingham
J. C. HARRIS, Warwick
HENRY SUMMERFIELD, Warwick
D. SUMMERFIELD, Leamington
T. R. COBB, Banbury
S. SPURRETT, Banbury
THOS. COLLINS, Warwick
WM. MUNTON, Banbury
J. MILLWARD, Neithrop, Banbury
E. MILLWARD, Neithrop, Banbury
R. S. WISE, Banbury
ELIZABETH PARRY, Banbury
ABEL PEYTON, Birmingham
SAML. BEALE, Birmingham
J. P. MOTTERAM, Manchester
SAML. BROOKS, Manchester
WM. A. GREER, Manchester
THOS. A. HOPE, Liverpool
JAS. COCKSHOTT, Liverpool
THOS. HILTON, Manchester
ROBT. JONES, Liverpool
THOS. COLMORE, Birmingham
JOSIAH JONES, Liverpool
THOS. D. HORNBY, Liverpool
THOS. GASQUOINE, Manchester
W. F. POWELL, Manchester
JOHN BEETHOM, Manchester
EDWD. HALL, Manchester
HY. RAWSON, Manchester
W. G. KEARSLEY, Manchester
THOS. TRUEMAN, Manchester
THOS. HEATH, Warwick
CHAS. LAMB, Warwick
JOHN MUNTON, Banbury
WM. WILSON, Banbury
THOS. A. GILL, Warwick
E. COBB, Banbury
W. J. KITE, Banbury
W. PAGE, Banbury
C. SATTERTHWAITE, Throgmorton-street, London
E. F. SATTERTHWAITE, Throgmorton-street, London
JOHN WALLER, Stock Exchange, London
A. A. HOGHTON, Stock Exchange, London
E. L. MORGAN, 3, Bank Chambers, London
J. and D. HAES, 15, Throgmorton-street, London
T. L. CROMMELIN, 7, Grove-end-road, St. John's Wood, London
J. E. PHILLIPS, Stock Exchange, London
R. GRISEWOOD, Stock Exchange, London
THOS. LAWRENCE, Denmark-hill, Camberwell, Surrey
WM. ANNING, 4, Park-terrace, Brixton
JOSH. LAURENCE, Auction Mart, London
J. LOCKE, 11, Adam-street, Adelphi, London
J. WHEELER, 3, Belgrave-place, Wandsworth-road, London
E. TAPLIN, Victoria-park, Hackney, London
G. KEITH, 11, Bridge-street, Westminster
J. M. PARSONS, 6, Raymond-buildings, Gray's Inn, London
J. C. FORSYTH, 100, Strand, London
E. STRONGE, 27, Duke-street, St. James's, London
J. W. COOK, 37, Throgmorton-street, London
R. HOLLOWAY, 6, Hanover-terrace, Kensington-park, London
W. J. BARKER, Stock Exchange, London
R. BAKER, Great College-street, Camden Town
C. G. G. WILKINSON, Holland-street, North Brixton
BENJN. GREEN, Evans's Hotel, Covent-garden
HY. HARGREAVES, 40, South-bank, Regent's-park, London
HY. TOOTAL, London
F. SWANWICK, Chesterfield
R. PEYTON, 33, Mornington-crescent, London
R. J. B. BROUGHTON, 1, Melcombe-place, Dorset-square, London
R. W. CARDEN, Stock Exchange, London
C. E. WHITE, 8, Cambridge-square, London
THOS. L. GOOCH, Hornsey-lane, Highgate
E. S. ELLIS, Leicester
R. PENDLEBURY, Stockport
W. S. ATKINSON, 11, Great Rider-street, St. James, London
JOSH. FIELDING, Leicester
J. D. HARRIS, Leicester
JOHN TAYLOR, Leicester
JOSH. CRIPPS, Leicester

Notice is hereby given, that, in pursuance of the Requisition hereinbefore set forth, an EXTRAORDINARY GENERAL MEETING of the shareholders of the BIRMINGHAM AND OXFORD JUNCTION RAILWAY COMPANY will be HELD at Dee's Royal Hotel, Temple-row, Birmingham, on Saturday, the 13th day of March, 1847, at Two o'clock in the afternoon.

Proxy papers, in order to be available, must bear a stamp of 2s. 6d., and must be received by the secretary 48 hours, at least, before the time appointed for the meeting.—Dated this 10th day of February, 1847.

PHILIP HENRY MUNTZ, Chairman.
JOHN W. KIRSHAW, Secretary.

IMPROVED LIFTING JACKS,

MANUFACTURED BY-

GALLOWAYS' AND CO.,

KNOTT MILL,

MANCHESTER.

IMPROVED RATCHET JACK.

HALEY'S PATENT LIFTING JACK.

*** The attention of parties who employ

Lifting Jacks,

is respectfully requested to the superiority of those annexed, over those hitherto in use.

ANOTHER ATMOSPHERIC RAILWAY TUBE.—Mr. W. Warcup, of Bristol, has just taken out a patent for an atmospheric tube, certainly superior in idea to many of the novelties we have had brought before us—but one which, we think, can never be brought into useful and economical application. His plan consists in forming the tube in *two* parts longitudinally; the upper part rising as on an air-tight hinge, and closing behind the piston coulter by its own weight—thus superseding the use of the valve employed by Samuda. Our scientific readers will at once understand how this is effected—the lower half of the tube is fastened to the roadway in the ordinary manner, and so placed, that one edge is lower than the other, forming an angle of about 45°. The lower edge of this has a groove, in which the edge of the upper half fits, acting as a hinge; and the opposite joints are made air-tight by an elastic substance, between which the coulter passes.

SWEDISH MINES AND RAILWAYS.—The Swedish Government has conceded to Messrs. Rosenborg and Malam of this town, civil engineers, the grant in perpetuity of the railroad from the famous Gellivaara iron mines, in the north of Sweden, to the Baltic. The distance is about 100 English miles. A company is now forming in England and Sweden to carry out the undertaking, for which 450,000*l.* is required. The land is given by the Government to the above gentlemen.—*Hull Herald.*

DUTY ON FOREIGN COPPER ORES.

TO THE EDITOR OF THE WEST BRITON.

SIR,—The *Cornwall Gazette*, of the 19th February, contains a letter addressed to its editor by Mr. Treffry [see *Mining Journal* Feb. 27], and an article purporting to be the production of the editor himself, which are, I presume, intended as replies to the letter which I addressed to you on the 26th of last month [see *Mining Journal* Feb. 27.] But replies to my letter they certainly are not—for they entirely evade every point of importance raised by me; they do not rebut any fact or argument, which I advanced, nor do either Mr. Treffry or his supporter venture to attack the real points upon which this question turns.

Before entering, however, into the consideration of these productions, I am bound, in justice to the gentleman to whom both Mr. Treffry and the editor of the *Cornwall Gazette* determinedly attribute the authorship of my letter—notwithstanding your previous clear and explicit statement that such was not the fact—to avow, in terms the most direct which language can convey, that in what I have written, the author of the papers signed "Y. Z." and "CORNUBIENSIS," if, indeed, they are the productions of one individual, is wholly innocent of any part or participation. I am aware that one at least of these letters have been attributed to a gentleman whose character for talent and knowledge of his subject stands so high, that I feel proud that any production of mine should be deemed worthy of his pen, even by persons whose writings do not impress me with a very favourable opinion of their powers of discrimination; but I cannot permit that such a supposition should be made the groundwork for personal attacks upon an individual, who, in this instance at least, has given no cause for them. Your own clear statement upon the subject ought and would, with persons of ordinary fairness of mind, have set the matter at rest. It is ever those most conscious of the power of evil in themselves, who are the readiest to imagine its existence in others.

If I considered it in any way necessary, if I thought it would make clearer any point in this discussion, I should not hesitate to append to this letter the writer's real name; but I do not see that I am called upon to do this, or that it would serve any good purpose. That a general confidence may be reposed in the statements which I put forth, you have satisfied yourself before giving your sanction to the publication of my letters, and to that extent you answer for me to your readers; but the value of my arguments, and the data upon which they are founded, do not depend upon personal testimony, for every one who chooses to inquire into the subject has the same means of information open to him that I have. And even if I made my name as prominent as Mr. Treffry has done his in this discussion, he—fructile as he is in invective, if not in argument—would from ignorance of his subject, fail to find that scope which he might expect for the exercise of his peculiar talent.

It is a pity, indeed, that Mr. Treffry cannot learn that even *his* name is not a good substitute for facts, or clamorous attacks upon all who differ from him, for arguments. The difficulty in dealing with his letter is, that it contains nothing tangible upon which issue can be joined. He has not ventured to apply himself to the facts and arguments advanced by me, for he knows that he cannot combat them; let any one read my letter and his rejoinder, and then say if this is not the case? But no—he will not meet the question fairly; he deals only in invective and loose assertion, continually repeating the same cry, that if the duty is repealed the Cornish mines will be ruined! And when I prove that the contrary will be the effect, and that if the Cornish mines are ruined at all, it will be by continuing the duty, he replies, by begging the miners not to listen to a writer who does not sign his name to his productions, and who must, therefore, be an enemy, and an emissary of his great bugbear—the smelters! In his own personal defence, too, he relies entirely upon that weakest of all testimony, evidence, and that his own, as to previous good character. When challenged as to the propriety of his conduct a month since, he replies by referring to the good he did in 1811, when he assisted in starting the Crinnis Mines; and he also explains how actively he exerted himself when the foreign ores first began to invade this country—carrying, according to his statement, dismay amongst the ranks both of miners and smelters. Now, on the subject of the proceedings of the smelters, either 15 years ago, or more recently, I have nothing to say; it is no part of my case or of my purpose to enter upon the defence of their consistency; they are, no doubt, able to do this themselves, if they think it necessary; I am quite ignorant of the part they took in reference to the importation of foreign ores in 1832, and could not therefore dispute Mr. Treffry's account of it, even if I were so disposed. I can very well imagine, indeed, that a circumstance so unprecedented, as large arrivals of copper ores from abroad then was, might naturally have caused apprehensions of great changes in the minds of parties deeply involved in existing establishments; nor can I wonder at great differences of opinion existing between these gentlemen, and one who, like Mr. Treffry, refuses to derive any benefit from the experience of the last 15 years, and the changes which have taken place during that period, and whose mind and information are so stationary, that he can only reply to arguments founded upon the most recent occurrences, by recapitulations of what he wrote seven years ago.

But that he may not assert that I have not met all that he has advanced, I will proceed to apply myself to the contents of his letter; and as the following extract contains the only direct attempt to meet the position which I have taken up, I will beg of you to find room for it entire:—

"But 'A. B.' wishes to make it appear, that if the foreign copper ores are not all brought to England for smelting, some of them will be smelted abroad, and that will create a competition with the copper in the hands of the English merchant, and consequently a fall in the price. Therefore, 'A. B.,' and the smelters generally, beg Cornishmen not to oppose the free import of foreign copper ores to Swansea, because it will destroy their competitors abroad, as if Cornishmen were unable to see that a glut of copper ores from abroad would produce a ruinous fall of the standard in Cornwall. We don't deny the good policy of allowing ores of a certain high produce to be smelted in this country, under proper restrictions; and at present those restrictions are so low, that the ores in question cannot be smelted with the same advantage to their owners in any part of the world as here. Your republication of Sir Charles Lemon's coal statistics last week would lead people generally to come to that conclusion, and I am prepared, when the proper time arrives, to prove it to a demonstration. In the mean time, I would remind Cornishmen, that 'A. B.'s' wish to allow all the ores in the world to reach the smelting-works of this country without restriction would be fatal to the Cornish mines. He himself says, 'the effect of competition is, all the world over, to reduce prices;' and yet, in the same paragraph, he says 'the Cornish miner is thus clearly and directly interested in maintaining in England the smelting of all the foreign copper ores which can possibly be brought here.' Thus, so far as assertion goes, they would create no competition with the Cornish ores—the competition before alluded to being one among the merchants abroad: but an overstocked market, whether abroad or at home, must produce just the same consequences, and the Cornish miners have too severely suffered from the quantity of foreign ores already sent to this country. But, take off the duty, and there will be, as fast as shipping can be procured for the purpose, tens of thousands of tons of ores sent to this country which are now excluded only by the duty."

Now, what evidence is there here of Mr. Treffry's incapacity to perceive or appreciate anything less directly under his eyes than the sale of his ores? Or, is it that he prefers risking his reputation for common sense and ordinary intelligence, to venturing to grapple with a position which he finds impregnable, and which he therefore pretends not to comprehend? Is it really possible, that he can perceive no competition which foreign copper ores can establish with British, except when they are brought together in ticketings? Is he not aware that the copper which his ores contain has to be sold chiefly in foreign markets? And does he doubt that if 500 tons of English copper, and a like quantity of American, Chilian, Swedish, or German copper, meet in competition in a foreign market—France for example—the whole will be sold at lower rates than if 1000 tons of English copper alone were offered in that market; and that it is according to the price realised for the copper that the Cornish miner will be paid for his ores? Can he fail to see that inasmuch as the price realised in the larger market, must of necessity regulate that obtained in the smaller, and as the consumption of copper in England is much less than her export—a great portion of the produce of British ores having to find a market in foreign countries, it follows that the price obtained for copper abroad will regulate the price paid for it by the English consumer, and of necessity also the standard or price of British ores? But by a few figures I will place this point beyond dispute:—The annual produce of copper in Great Britain, may be stated at about 25,000 tons. Of this quantity, Cornwall supplies just 12,000 tons; her production has been very regular for many years, rarely exceeding the quantity I have named, or being so little as 11,000 tons. Ireland, North Wales, Devonshire, &c., produce about 3000 tons of copper annually. Of the 25,000 tons which Great Britain produces, her own mines, therefore, supply 15,000 tons, and foreign mines 10,000 tons. Now the statement derived from the Parliamentary returns which I gave to you on the 15th February, shows that for several years an average of about 18,000 tons of copper has been exported by England, although the export is decreasing with the decreased importations of foreign ores. It is thus clear that England has to find a market in foreign countries for half the produce of her own mines. Who, looking at these facts, can for an instant hesitate to admit, that it is the price of copper in foreign markets which must regulate that of Cornish copper ores? Who can doubt, that if English copper is competed with in those foreign markets, a lower price will be obtained, and a lower standard yielded to the Cornish miner? And yet Mr. Treffry talks of the competition with foreign ores in the ticketings, as if it were the only competition that Cornish mines have to encounter! They have a much more serious war to wage in the markets of the continent, of the United States, and of India.

The only thing which could attain the point Mr. Treffry evidently desires to arrive at, would be a special enactment to oblige buyers in foreign markets to give such prices for English copper, irrespective of what they could buy foreign copper at, as would yield at all times, and under all circumstances, a "fair standard!" But can he point out any practicable means by which the degree of protection which he requires can be afforded the British mines? I think I have shown clearly that the duty now imposed on foreign ores is the reverse of a protection. No duty imposed elsewhere than in the country in which the ores are produced would be of the smallest service, and I presume that Mr. Treffry will admit this to be beyond our attainment.

If Cornish mining really required such unnatural forcing, such hotbed treatment to keep it alive, as Mr. Treffry would insist on, does any reasonable man think that it could long survive, in a temperature such as that in which we live, and surrounded by hardy interests which he would fain tax to support it? If such were its condition, the evening of Cornish mining would, indeed, have arrived; but, fortunately, it does not need such unnatural support, and with fair play and a fair field can hold its own against all competitors. That mining, on the whole, is not unprosperous, Mr. Treffry is himself a sufficient proof. But he says, "we don't deny the policy of allowing ores of a certain high produce to be smelted in this country under proper restrictions." And why does he not deny it? *Clearly because he is obliged to admit that, if they are smelted abroad, they will do more mischief to the Cornish miner than if smelted here.* And this is the whole question. If any foreign ores can be admitted with benefit to the Cornish miner, all ores which, when rejected, are smelted elsewhere, should also be admitted—this is beyond dispute. And now let me turn to this part of the subject. The present scale of duties increases as the produce of the ores imported increases; and, by "proper restrictions," Mr. Treffry, no doubt, means that he would place a yet higher duty upon them. Bearing in mind his admission, that the ores of high produce ought to come to this country, let us examine how this increasing scale of duties operates. It is evident that the richer ores, especially those which have been partially smelted abroad, such as regulus, require less coal, less labour, and skill, less in fact of the peculiar facilities which this country possesses for smelting, than poorer ores; and that they can be converted into copper at less expense in countries which are deficient in these advantages; and yet the duty upon them is higher. If this is not a direct encouragement to smelting abroad, I know not what is; and the effect is clearly shown by the fact, that since the imposition of the duty, France has deprived this country of the whole of the rich ores of Bolivia.

And now, in reference to the poorer ores; Mr. Treffry says, "Take off this duty, and there will be, as fast as shipping can be procured for the purpose, tens of thousands of tons of ore sent to this country which are excluded now only by the duty." So much the better, say I, if any such enormous stocks as he imagines exist in any part of the world; for if they exist, or if the means of their production exist in such extraordinary abundance, depend on it they will meet us otherwise in a much more unpleasant shape. But in order to alarm the mining interest, Mr. T. has here stated what he cannot believe. No such enormous stocks of ore exist, nor are the means of production of foreign countries so wondrous as he would make out; if it were so, however, they are not to be kept lying idle in heaps, or unwrought beneath the soil, by any process of legislation. But, in fact, the great bulk of the copper ores produced, as well in South America as in Cuba, does not greatly exceed 12 per cent. in produce. The cost of conveyance from Cuba was sufficiently moderate to allow, until the imposition of the duty, of these ores being brought to England, and they were so brought. Now the island of Cuba, though the editor of the *Cornwall Gazette* does not appear to be aware of it, is very close to those ports of the United States which are the outlets of its coal-fields, particularly Baltimore, New York, and Boston; and, however astonishing it may appear to the editor, these ores *are* sent to the United States, and have been sent there in considerable quantities ever since the imposition of the duty. The rate of freight from Cuba to the United States is very low; not one-third of that from the same island to England. America, in fact, supplies Cuba with corn, "lumber" as it is termed, and other articles of her produce, to the value of more than 1,000,000*l.* sterling annually; and the vessels employed in the trade are very glad to take back copper ores with sugars, instead of ballast, at an almost nominal freight. At the commencement of mining in Cuba, indeed, the ores were largely sent to England by way of New York and Baltimore, it being the cheaper route; but as the production increased, it was found more convenient to avoid the delays and uncertainties of so circuitous a voyage, by establishing a regular fleet of ships, built purposely for the trade, which go out from England in ballast, or take coals as a back freight. As the market for the ores in the States increases, more and more of them are sent: of course, it is not pretended that the infant works in the States are as yet capable of smelting all the ores of Cuba; but upon the means of smelting which America possesses, I have a few words to say bye and bye. I will first apply myself, however, to the poorer ores of South America. These ores could, under no circumstances, bear the heavy charge of 5*l.* per ton, which is the average freight paid for copper ores from Chili to England; but their production does not, therefore, cease. They form the great bulk of the produce of Chili, and from the commencement have undergone one simple smelting process; which requires but little fuel and little skill, and by which they are brought up to from 35 to 45 per cent. in produce, and have come to England as regulus. These are the very same rich ores which Mr. Treffry says it would be good policy to admit for smelting! Now, however, unfortunately, the duty is inducing the Chilians to carry their processes further, and to convert them into copper, which is taking the place of English copper in the French, American, and Indian markets. My first letter went so fully into detail upon the subject of the proceedings which are taking place in Chili in reference to smelting, that it is unnecessary again to go over the same ground. One smelting-work, upon the English system, has within two years been brought into an annual production of 1200 tons of copper, fully equal to English in quality; and others are about to be established, if they have not already been commenced. What I have advanced on this subject there has been no attempt to controvert, and I presume it to be admitted.

And now for a few words about the means of smelting which the United States possess.

[*To be concluded in next week's Mining Journal.*]

Mining Correspondence.

ENGLISH MINES.

BARRISTOWN.—We have suspended the 23 fm. level for the present. The lode in the 18 fm. level end west is at present taking down, it is worth about 20*l.* per fm.; there are 20 fms. more to take down to complete it to the end; we are working a pitch close behind this end, which is looking very well, worth from 20*l.* to 25*l.* per fathom; a few fathoms further east, in back of same level, the lode looks poor; in the bottom of the 18 fm. level, behind the end, we have a lode worth about 18*l.* per fm., for 20 fms. The lode in the 12 fm. end west is improving, worth about 18*l.* per fm; the back behind this end also looks pretty well, worth about 16*l.* per fm.; we hope the bottom of this level will turn out good tribute ground, as the lode appeared best in bottom of end—we are rising from the 18 fm. level to the 12 fm. level; the lode in this rise looks promising, worth about 8*l.* per fm. We hope to communicate the winze from 18 to 28 fm. level in a few days, which will facilitate our operations greatly in bottom of 18 fm. level. In the adit end east, the lode is at present small; there is a part standing to the south of end, which we are leaving in order to get the end on to middle shaft, between Nangle's and engine—this will occupy three months to accomplish, and will unwater ore ground when done. At Clon Mines, in the adit end, we have a flookan, with branches of spar in the end—the ground improves as we get west.—T. ANGOVE: Feb. 25.

BEDFORD UNITED.—At Wheal Marquis, in the 80 fm. level east, we have cut the slide; the lode home to the wall of the slide is from 3 to 4 ft. wide, and worth 35*l.* per fm. The lode in the 70 fm. level east is 2 ft. wide, producing good work, looking more promising than for some weeks past. There has been no lode taken down in the 58 fm. level east. At Wheal Tavistock, but little has been done, the men being put to work at Liscombe Mine, clearing and securing the old engine-shaft, &c., &c. The south engine-shaft is 25 fms. 4 ft. under the surface; there has been but little ground sunk in this shaft the past week, the sumpmen having been engaged taking down lode, &c., the lode is 3 ft. wide, producing some good saving work. The lode in the adit level east is 3½ ft. wide, composed of spar, mundic, and ore, 8 in. in the north part good saving work. We weighed at Morwelham, on Friday last, December ores, 101 tons 19 cwts. 2 qrs.; and sampled January, computed 111 tons.—JAMES PHILLIPS: March 2.

BIRCH TOR.—The engine-shaft is down about 7 fms. below the 62 fm. level; the lode has a promising appearance, with spots of tin. The 62 fm level, east of the engine-shaft, has been driven since it passed through the last shoot of tin about 3 fms.; the lode is poor, but is very likely to make tin again soon. The 50 fm. level, east of the engine-shaft, has been driven about 12 fms. north on a counting branch—here the branch has been poor, but the end is now within a few fathoms of the point where the lode takes an easterly direction; at this point, in the 40 fm. level, we are now sinking a winze (going down before the 50 fm. level), where we have a good lode, worth about 20*l.* per fm.—this being the case, we have strong hopes of the 50 being good also. Goppey's shaft is down about 10 fms. below the 11 fm. level; the lode here has been producing a little tin throughout the whole of the sinking, but it has been seldom worth much. The 11 fm. level has been driven about 6 fms. east from Goppey's shaft, the lode through the first 4 fms. was poor, it is now very promising, producing good stones of tin, and worth about 7*l.* per fm. In the deep adit east, the lode up to within the east 6 ft. has been hard and poor; it is now changed very materially for the better, producing good stones of tin; as this level is now approaching the run of tin ground driven through in the middle adit level, we have also great hopes of its now turning out well. The lode in the middle adit is producing tolerable good work; it is worth about 6*l.* per fm., but the ground at present is heaved. The pitches, on the whole, are looking better at this time than they have before, since we have been working the mine. The Vitifer deep adit is still being driven in new gound; the progress is very slow, being about 6 ft. per week. Taking the mine, as a whole, the prospects are better than they have hitherto been; the whole of the new ground has produced very fair quantities of tin, and I have no doubt of the ultimate success of the concern.—R. EDWARDS.

CALLESTOCK.—At the adit level about 100 fms. have been driven south, the first 50 of which was through a lode varying in width from 2 to 6 ft, composed chiefly of good gossan, in which several small branches of lead ore were discovered; further south, less gossan and more spar in the lode has been found, but latterly good stones of lead ore have been met with—and the end of the level, which we are continuing to drive by four men, has a large sparry lode in it, with a small quantity of ore; this level is now passing through a high ridge of ground, in which we expected to find the lode less productive than it would be in the lower ground; the summit of it, however, has been passed, and a favourable change in the lode may be looked for, as the level approaches the lower ground southward. In the 6 fm. level, about 12 fms. in length were opened, during the latter part of last summer—here the lode is large, with more lead in it, and less gossan, than it had at the adit level—and this ground is now being worked at 19*s.* per ton of ore; we are not extending this level south at present, but shall do so shortly. The engine which has been erected at the joint expense of Callestock Mine and Perran Wheal Virgin adventurers, in accordance with the resolutions of both parties, on the 21st of August last, is one of 33-inch cylinder, and was set to work on the 14th of January; since that time the engine-shaft has been sunk about 3 fms., and it will be deep enough for a 15 fm. level below the adit, by the end of next week—the lode at that depth will not be more than about 3 fms. from the shaft, and will be reached in a few days afterward. The sinking the engine-shaft below the 15 fm. level will be resumed with the least possible delay, and we hope to get it down for a 20 fm. level by the end of April next. A large quantity of stuff holding lead ore is already at the surface, which we have commenced dressing, and shall get prepared for

sale as fresh circumstances will permit. It is difficult to estimate the quantity of lead ore which there is on the mine at this time, as it is scattered through a large mass of stuff; but we think it is not less than 10 tons, and we shall be able to make some addition to this quantity from the 6 fm. level, but not to any great extent until ground has been laid open in the 15 fm. level. The call of 4l. per share now made, after liquidating the balance due to the purser at the end of last month, will pay the cost for February and March.—W. Francis; C. Oates: February 16.—[A report of the meeting of adventurers appeared in our last Journal.]

COOK'S KITCHEN.—In Chapple's lode, the engine-shaft is now sinking below the 180 fm. level, and the part of the lode which we are carrying is 6 ft. wide, and poor; in the 180 fm. level east the part of the lode on which we are driving is 4 ft. wide, and worth from 5l. to 6l. per fm. In the 170 fm. level east the part of the lode on which we are driving is improved since last reported, and now worth 10l. per fm. The new east shaft has been communicated to the 148 fm. level, where the shaftmen are now engaged in cutting a plat; after completing which, which will take rather more than a month, they will commence sinking below this level; the men who were driving the 148 fm. level east will now be put to rise in the back of the 160 fm. level, against new east shaft, immediately; in the winze, sinking below the 148 fm. level west, which is now down about 7 fms., the lode is larger; but being the flookan part is not very rich, although producing tin. In the 92 fm. level west, on Eudy's lode, the end is worth about 5l. per fm.; the tribute department is, on the whole, rather improved since the last report. We hope to send to the smelting-house, on Saturday next, about 26 tons of tin; the quantity would have been more, but that the new pitches, from which we expected our best supplies, have not yet been got into regular course of working—having required timber to be put in, roads made, and other preparations, which has caused a week's delay. In a fortnight after our next sale, we think we shall be able to get about, and send to smelting-house, 16 or 17 tons.—J. Vivian: March 1.

CUBERT SILVER-LEAD.—We have this day held our public setting for March, the particulars of which you have forwarded by this post—we have also just finished our January pay; the sumpmen have completed putting in the bearers, cistern, and large lift to bottom, and are now engaged in opening more of the whim plat, and driving the 35 fm. level cross-cut north towards the lodes—we shall connect and set to work the second boiler to-morrow. The lode in the 25 fm. level, going west, is about 1 ft. wide, but at present unproductive; going east, in that level, the lode is 3 ft. wide, carrying a leader about 6 in. of very good work for lead. In the 15 fm. level, going west, the lode is 18 in. wide, and yielding rich stones of ore; in this level east, the lode continues a large promising gossan, and occasionally producing some lead. Our computed 80 tons of silver-lead ores, was sold on Saturday, the 20th inst., to Messrs. Walker, Parker, and Co., Chester, at 12l. 4s. 6d. per ton (21 cwts.): 978l.—R. Rowe: Feb. 26.

DARTMOOR CONSOLS.—This valuable tin mine has been wrought for a number of years by J. H. Deacon, Esq., and others. I am assured it has returned upwards of 30,000l. of good tin, the same sort as I here send you. There is an adit level driven east on the main lode upwards of 600 fms., where the greater part of the tin ore was risen from the backs and bottoms of the said adit level; and I am positively informed by old men of renown, that there are good bunches of tin ores gone down in different places in the bottom of the adit, at the shallow depth of 9 to 12 ft.—but the influx of water, and the softness of the ground, prevented further operations on the continuance of the bunches of tin ores in the bottom of the shallow adit level. At the eastern extremity of the adit level, there is a shaft sunk under the adit 10 fms.—there the miners were driven also by the influx of water, and softness of ground; at the time the miners were obliged to abandon this place, they had the lode 1 ft. 8 in. wide, solid tin ores, and there it remains unto this day in that case—I must say it is a wonderful concern. The stone of black tin, and sample of white tin, was risen from the bottom of this very shaft, only 10 fms. under the shallow adit; you must remember the depth of the shallow adit from the surface is 31 fms., and 10 fms. sunk under the adit makes the mine on the same depth only 41 fms.—so much for the shallow adit level. The proprietors also commenced a new and deeper adit level, as the last was looking so promising and good; about 60 fms. farther to the west, on the line of the lode, which level, I do not hesitate to say, will come in under the shallow adit level 29 fms., making the depth of the deep adit 60 fms. from the surface on the course of the lode—this level is driven east on the lode about 120 fms., and there rose a great deal of tin. A dispute took place with the proprietors, and there finished—that was a great pity. In a word, it is a real good mine at this time thrown away by the old proprietors and agents; at the same time, I do not hesitate to say, should there be a good spirited company take hold of the mine, and stock 3000l., and sink a new engine-shaft 50 fms. deep from the surface, it will open an entrance into the mine to enable tens of thousands of pounds to be returned to the good of the proprietors. I trust that this valuable sett will be taken up and worked with spirit, and I have no doubt it will make the same return in tin as the Wheal Maria has in copper. There is a great deal of materials on the mine. The above sum will be fully sufficient to put the buildings, &c. in repair, and make good returns. On the said mine there is a large mansion-house, captain's-house, smelting-house, smith's-shop, and various other buildings, too numerous to mention. —J. Floyd: *Stoke Climsland, Feb. 4.*

DEAN PRIOR AND BUCKFASTLEIGH.—In the 50 fm. level, where I put the men yesterday to cross-cut north, there is evidently more of the lode north of the present level, which is of a promising description, and producing some stones of ore, being a large strong champion lode; how large I cannot say at present, for we have not as yet taken the north wall; it is highly pleasing to find the lode holding north of the present workings of so promising a character—as these several branches, or strings, will, I have no doubt, lead to a good course of ore. There is no alteration in the other departments.—Henry Choake: Feb. 27.

DEVON AND COURTENAY.—There is very little difference in the ground in the engine-shaft; we put down the last pump on Saturday, to make the shaft 30 fms. deep. I have stated in my former reports, that the ground in the shaft is hard—but I ought to have said that the ground is hard, according to the price given, which is 9l. 10s. per fm. for sinking the 10 fms., and 13l. per fm. would be a fair price at present. There has not been anything done in the deep adit, on south lode, for the week, as the men have been assisting the carpenter in fixing the flat-rods, &c. We have put down the pumps in the north shaft, and we are fixing the flat-rods and bobs, and I hope to get them to work on Friday. The ground in the shallow adit, on north lode, is still favourable; lode 3 ft. wide, with a branch of mundic 9 in. wide on the north wall, with some lead in the other part of the lode, but nothing worth saving.—John Jor: March 2.

EAST TAMAR CONSOLS.—At Whitson, I have put the shaftmen to cut a plat at the 60 fm. level to prepare for sinking, as our lodes in the bottom levels are looking very promising. I have set the 60 fm. level north to drive by six men—they are to drive the level, and stope the back at 7s. in the 1l. for lead; the lode in the 60 fm. level south is 2 ft. wide, a very kindly lode. The lode in the 54 fm. level north is small—I expect it is near the slide ground, so I thought it best to suspend it for the time; the lode in the 54 fm. level south is 15 in. wide, saving work. The lode in the 46 fm. level south is almost holed to the old workings which were made in the 36 fm. level south; we have bored a hole and ventilated the water, so that the men in the bottom levels will work more comfortable. At Furzehill, the shaftmen have commenced cutting a plat in the 46 fm. level, to prepare for sinking; the lode in the bottom of the shaft is 2 ft. wide, good work. The lode in the 46 fm. north is 2 ft. wide, producing good stones of silver-lead ore; the lode in the 46 fm. level south is 20 in. wide, saving work. The lode in the 38 fm. level north is 18 in. wide, fluor-spar and silver-lead ore; the lode in the 38 fm. level south is 20 in. wide, producing good work. I am happy to say, the appearance of our mines are very promising at present.—B. Robins: March 2.

EAST CROWNDALE.—In the past week the ground has changed in our engine-shaft considerably for the worse, having cut a channel of spar which we have seen 3 ft. thick, and still holding—we have sunk about 3 ft.; I hope we shall soon get through this channel of ground, as sinking while it holds will be very slow. At Rye Hill, we have commenced our shallow adit in so far favourable ground for speed; in sinking on the lead lode we have had such an increase of water as to greatly impede our sinking the shaft, which is down 7 fms. 5 ft.; we have commenced driving to cut the lode 3 ft. 6 in. above the bottom of the shaft, at which place the water escapes through the country; our engine and pitwork are all in good order.—S. Paull: Feb. 27.

GREAT MICHELL CONSOLS.—The engine-shaft is down below the 22 fm. level, 8 fms. 3 ft., the lode in which is very promising, still producing rocks of ore, intermixed with fluor-spar, and mundic, and has every appearance of improvement.—T. Richards: March 2.

GREAT WHEAL MARTHA.—Although a breakage of the windbore of the sinking-lift, during the last fortnight, somewhat retarded the operations in the new engine-shaft, it is, nevertheless, being sunk with every possible dispatch, the ground in which is of a favourable character. It is now sunk 39 fms. 1 ft. below the adit level, at which depth the ground is cut down for the plunger-lift, &c. As a whitish, soft, thick, laminated slate has been sunk through from the adit, to the bottom of the shaft, we reasonably anticipate finding a continuation of this favourable ground in cross-cutting the lode at Sherrall's Bottom. The lode in the adit level assumes a more regular form, and it contains a little tin, of good quality.—J. Prince; T. Penaluna.

GUNNIS LAKE.—At Chilsworthy, Bailey's engine-shaft is 5 fms. 5 ft. under the 12 fm. level, the lode is without alteration. The lode in the 12 fm. west is 2 ft. wide, composed of gossan, spar, and capel, with stones of copper ore in places. There has been no lode cut in this level east of the cross-course.—W. Richards: March 2.

HAWKMOOR.—In the 15 fm. level, east of Hitchins's shaft, the lode is 2½ ft. wide, composed of capel, spar, mundic, and stones of ore.—P. Richards: March 2.

HANSON.—In the 32 fm. level, east of the engine-shaft, on Stainsby's lode, the same slide which we had in the engine-shaft, in the 12 fm. level, is now just come in the 32 end; the lode is from 20 in. to 2 ft. wide, with some ore. On the lead lode we have sunk two pits, from 3 to 5 fms. deep—about 40 fms. apart—and, from its unfavourable appearance, we have discontinued it.—Z. Williams: March 1.

HERODSCOOMBE.—We have cut the lode, it appears, from 1 ft. 8 in. to 1 ft. 6 in. wide, bearing about 10° west of south, composed of gossan, sugary spar, yellow flookan, and capel, and impregnated with lead throughout, just as it was in the pits above—I am of opinion it will make a good mine, and that very quickly too. Where we have cut it, it is about 3 fms. under the surface. —J. Medlen.

HOLMBUSH.—The diagonal shaft is sunk 10 ft. below the 120 fm. level, the ground in which is still favourable, and the branches much the same as last reported on; the lode in the 120 fm. level, west of the great cross-course, is 1 ft. wide, composed of hard spar, mundic, and spots of ore; the lode in the stopes, in the back of this level, is 16 in. wide, and worth 30l. per fm.; the lode in the 120, east of Hitchins's shaft, on the north part, is 1 ft. wide, composed of mundic and stones of rich yellow and purple copper ore. We are also preparing to drive the 110 fm. level, east of Hitchins's shaft, on the south part; the lode in the 110 fm. level, west of the lead course, is small and worthless; the lode in the 110 south is 2 ft. wide, composed of spar, prian, and spots of lead; the lode in the cross-course and the slide is still disordered; we expect to make the communication to the 120 fm. level this week. The lode in the 100 fm. south is 3 ft. wide, composed of spar, prian, and a branch of lead, 4 in. wide for the height of the level, worth 28l. per fm. The lode in the 90 fm. level south is 2 ft. wide, composed of spar, prian, and spots of lead. We weighed, at Calstock Quarry, on Friday last, January ores, 88 tons 13 cwts. 2 qrs., and sampled February ores, computed 80 tons.—W. Lean.

ILAM.—I hope by to-morrow to get out of the lode north of Robins's lode a stone of copper, which will weigh at least half a hundred weight, of the same quality as that already obtained, which is of high produce—thus proving that the lode is improving as we drive forward. The ore in this end lays in vughs, or what is called in this district "shakes." It appears that some branches of spar cut in driving north are coming into the lode and making ore. The lead lode is becoming more settled, with some stones of carbonate of copper intermixed.—February 26.——I am glad to inform you that we have this day cut a bunch of copper ore, 1½ ft., by making up and down in the end.—James Sprague: February 27.

KIRKCUDBRIGHTSHIRE.—Having gone through our monthly setting for the ensuing month (March), I now beg to hand you a statement thereof, and report of our prospects:—Stewart's shaft is 2 fms. under the 30 fm. level—the lode in it is upwards of 4 ft. wide, producing 1½ ton of lead per fm; we have set this shaft to be sunk the necessary size, for footway, pit work, and railroad, to the 40 fm. level, to nine men, at 85l. the job. The lode in the end west, in the 30 fm. level, is 4 ft. wide, producing 1 ton of lead per fm.—set to six men, at 5l. per fm; the stopes in roof of this level are producing 1 ton of lead per fm.—set to six men, at 3l. per fm.; the lode in the end east in this level is 4 ft. wide, containing a mixture of lead, jack, and spar—set to six men, at 3l. 15s. per fm.; the stopes in roof of this level are producing 1½ ton of lead per fm.—set to six men, at 50s. per fm; the stopes in east end of the winze are producing half a ton per fm.—set to two men, at 2l. per fm. The lode in the east end, in the 20 fm. level, is disordered by a slide; set this to four men, to cross-cut north 1 fm., at 7l. per fm. The lode in the adit end east is disordered by several joints of flookan; set this to two men, at 50s. per fm. We have engaged the *Mary*, of Garliestown, to take our lead to the Holywell ticketing, computed 33 tons; this vessel is now discharging coals at our port, the Palmire, and arrangements are being made to ship the ore on Monday next, 1st proximo.—J. Buzzo: Feb. 27.

MENDIP HILLS.—I have nothing new to inform you this week in the underground department; the lode in the shaft continues about 2 ft. 6 in. wide, composed of quartz, iron, and a little flookan, with particles of lead at times—down 16 fms. 2 ft. below the 38 fm. level. In the 38 fm. level driving south the lode continues about 9 ft. wide, composed of spar, flookan, and spots of lead; present price 60s. per fm.: this end is extended 15 fms. from the shaft; we have about 5 or 6 fms. further to drive, in order to get under the large cavern gone down in the level. In the slag department our operations, during the past week, have gone on satisfactorily.—F. C. Harpur: March 1.

NEW EAST CROWNDALE.—There is little to add to my report of last week—the appearances of the lode in the 14 fm. level being much the same; we shall prosecute the workings here with spirit, more especially as as we are expecting an extension of the sett on the run of the lodes.—J. Carpenter.

SOUTH DOLCOATH.—The engine-shaft is now nearly to the 30 fm. level, the lode in the bottom still large, and very promising. The lode in the 20 east is 4 ft. wide, producing some very promising stones of ore; the lode in the 20 west is 3 ft. wide, producing some ore, and very promising.—W. Paul: March 1.

SOUTH TAMAR UNITED.—We have cleared and secured the adit level almost to a shaft called Monday shaft, where we have removed the whim from the adit shaft, and fixed it on Monday shaft, to make it convenient for clearing the level, as it will cut off 80 fms. wheeling in the adit. The engineers have commenced heaving in the machinery.—B. Robins: March 2.

SOUTH WHEAL TRELAWNEY.—Snell's engine-shaft is sunk 13 fms. 6 in. from surface, the ground in which is not quite so favourable, but still a beautiful light blue killas, with prian heads and veins, of fluor-spar, and the water has increased a little; we have again sett it to sink by 9 men, at 12l. per fm. Sobey's lode, in the adit level south, is 20 in. wide, composed of gossan, mundic, flookan, spar, and sprigs of lead, and is sett to drive at 4l. 10s. per fm. I beg to inform you that six masons will commence building the engine-house on Monday, and we calculate (should the weather continue favourable), that it will be completed, with the boiler-house and stack, in six weeks. The walls of the account-house, smith and carpenter's shop, will be finished by the middle of next week. I have also been to Plymouth, to obtain information about a vessel to bring the engine from Portleaven to St. Germans, and the agent, Mr. J. Stevens, has engaged to get one when the house is built to receive it; when no time shall be lost in giving him early information, to enable him to get it brought home in good time.—W. Lean: Feb. 27.

TAMAR SILVER-LEAD.—In the 160 fm. level, south of the shaft, the lode is 2 ft. wide, producing saving work, and of a promising appearance. In the 145 fm. level south the lode is 1 ft. wide, composed of capel and ore, good work. In the 135 fm. level the lode is 3½ ft. wide—6 in. of which is rich work. In the 125 fm. level the lode is 3 ft. wide, composed of killas and ore, yielding work of a good quality. In the rise, in the back of the 35 fm. level, the lode is 2 ft. wide, composed of can and ore. In the 160 end, north of the shaft, the lode is 1 ft. wide, producing good stones of ore. In the 145 end ditto the lode is 18 in. wide, good work for silver-lead ores; on the whole, I am happy to say, our ends are looking very promising. At the north mine, in the 70 fm. level, the lode is 3 ft. wide, unproductive; we do not expect to meet with much ore in this level, until we get a few fathoms further north, and cut the run of can ground that is dipping towards us in the level above. In the 60 fm. level the lode is 2½ ft. wide, composed of capel, can, and ore; work of a promising description. We hope to sample, on Friday, the 5th inst., about 90 tons of rich silver-lead ores.—James Sprague: March 1.

TINCROFT.—We can do nothing in the 100 fm. level up to this time, in consequence of the increase of water. The lode in the 90 fm. level east is 2½ ft. wide, producing coarse quality ore, worth 5l. per fm.; the 90 east, on north lode, has improved since my last, now worth 15l. per fm.; we are driving a cross-cut to cut this (north) lode to the east of the cross-course. The south lode in the 80 east is 2½ ft. wide, worth 8l. per fm. for tin; the 80 west is worth 15l. per fm. The 70 west is producing some ore, and kindly; the lode in the winze, sinking below the 70, is orey, and improving as we sink. The lode in the 60 west is large, composed chiefly of mundic, with some ore, and promising. The lode in the 50 west is 2 ft. wide, worth 8l. per fm.; our pitches in this part of the mine continue to look much the same as for some time past. In the south mine, the winze, sinking below the 90 fm. level, on Chapple's lode, is worth 10l. per fm.; the lode in the rise is worth 10l.—we are expecting to hole this place every day. The lode in the 152, west of engine-shaft, is 2 ft. wide, worth 12l. per fm. The lode in the 142 east is 4 ft. wide, worth 15l. per fm. The lode in the 120 east is 4 ft. wide, worth 8l. per fm. The lode in the 110 east is 15 in. wide, worth 10l. per fm. The stopes, in the bottom of the 100 fm. level, are worth 35l. per fm. We shall be in course of sinking the engine-shaft, below the 152, in a day or two; our pitches, in this part of the mine, continue to produce fair quality tinstuff: on the whole, I am glad to say, that our prospects are better than when I wrote my last report.—W. Paul.

TRELEIGH CONSOLS.—The 110 fm. level, at Christoe's (this shaft is just arrived in this level), will be driven north-east to cut the cross-course; no measurement for the shaft, as they had a contract of 80l. to complete. In the 100, east of ditto, the lode is 2 ft. wide, with a small quantity of ore, not to value—at the same time, the lode has a very kindly appearance; the 100, west of ditto, is driving in the country. Garden's shaft, below the 90, is a very hard shaft, still in elvans; in the 90, west of ditto, the lode is about 2 ft. wide, with occasional stones of ore—these men have been communicating a winze between the 80 and 90 fm. levels. In the 80, west of ditto, the lode is 3 ft. wide, producing stones of ore, and has a kindly appearance; in the 80, east of ditto, the lode is 20 in. wide, worth from 12l. to 14l. per fm. In the 70, west of ditto, the lode is 2½ ft. wide, with a very promising appearance; in the winze, below the 60 west, the lode is 2 ft. wide, producing stones of ore; in the 70, west of Goodfortune, the lode is 3½ ft. wide, worth about 10l. per fm. In Symons's shaft, below the 60, the lode is 5½ ft. wide, yielding stones of ore, not to value. The winze, below the 44 west, will be sunk in orey ground 4 fms. behind the present end; I cannot yet give its value. In the 20, west of ditto, the lode is 20 in. wide, worth 3l. per fm.—W. Symons: Feb. 28.

UNITED HILLS.—In the 90 fm. level nothing done for the past week, in consequence of the water. In the 80 fm. level, eastern end, the lode is 3 ft. wide, worth 16l. per fm.; west of cross-cut the lode is 18 in. wide, worth 12l. per fm. In the 70 fm. level, eastern end, the lode is 2½ ft. wide, worth 8l. per fm.; in the stopes the lode is 3½ ft. wide, worth 20l. per fm. In the 60 and 50 fm. levels no tutwork. In the shallow adit the lode is 3 ft. wide, worth 3l. per fm. At Wheal Charles, in the 50 fm. level the lode is 2½ ft. wide, poor. In the 40 fm. level, eastern end, the lode is 3 ft. wide, worth 12l. per fm.; in the winze, sinking below this level, the lode is 6 ft. wide, worth 18l. per fm.; in the stopes the lode is 3 ft. wide, worth 20l. per fm. At Wheal Sparrow, in the 40 fm. level, the men during the past week have been engaged clearing stuff, and putting in tramroad. In the 30 fm. level the lode is 4 ft. wide, worth 9l. per fm. In the 20 fm. level no tutwork. In the adit level the lode is 1 ft. wide, producing but little ore.—T. Trevenen: R. Williams: March 2.

VICTORIA TIN.—Since my last, I am much pleased to inform you, that we have discovered an east and west lode to the south-west of our engine-shaft; the lode here is working big, nearly all saving tinstuff. Our men have been, during the last few days, engaged in bringing home a lobby, by which we shall be able to drive into the hill, on the course of the lode, leaving from 5 to 8 fms. of backs to work away; and from the present appearances, some good returns of tin will be made from the adit level. To-day I have put some men to make floors, &c., for holding the tinstuff—other things much the same as last reported.—James Chynoweth: Feb. 28.

WEST WHEAL MARIA.—The lode in the eastern engine-shaft is a little improved, about 5 ft. wide, producing good stones of ore; at the western engine-shaft, the ground is much the same as last reported, lode 2 ft. wide, with spots of ore occasionally. In the 54 fm. level, east of this shaft, the lode is 2½ ft. wide, composed principally of spar, mundic, and spots of ore in places. In the cross-cut south, in this level, the ground is much the same for driving as last week. —T. Rodda: March 2.

WEST WHEAL JEWEL.—In the 115 fm. level east, on Wheal Jewel lode, the lode is worth 3l. per fm. In the winze, in the bottom of the 100 fm. level, east of cross-cut, on the same lode, the lode is 2 ft. wide, producing good stones of yellow ore. In the winze, in the bottom of the 85 fm. level, west of Hodges's cross-course, on the same, the lode is 18 in. wide, worth 8l. per fm. In the 70 fm. level, west of Williams's cross-course, on Wheal Jewel lode, the lode is 2 ft. wide—when last taken down worth 9l. per fm.; we shall take down all the lode that we have opened on against our next week's report in these levels and winzes. In the 12 fm. level, west of Quarry shaft, on Tolcarne tin lode, the lode is 18 in. wide, worth 12l. per fm.; in the winze, in the bottom of this level, the lode is 3 ft. wide, worth 30l. per fm.; the stopes, in the back of this level, is worth 15l. per fm.; in the winze, in the bottom of this level, east of Quarry shaft, the lode is 1 ft. wide, worth 10l. per fm.; in the 12 fm. level, west of old sump shaft, on Tolcarne tin lode, the lode is 1 ft. wide, worth 10l. per fm.; in the adit end, west of Quarry shaft, on the same lode, the lode is 9 in. wide, worth 6l. per fm.—R. Johns: March 1.

WHEAL ADAMS.—The 60 fm. level, driving south, is still in the elvan course, the lode 12 in. wide, the branches are coming together, the lode is composed of mundic, jack, spar, and lead. In the 50 fm. level, driving south, on the eastern lode, they are driving on by the side of the lode—no lode taken down since last reported; in the 50 fm. level, driving south, on the western silver-lead lode, there is a very fine lode, but we are obliged to stop it up, the ground is so soft, and there is so much water, that we cannot get timber to stand it; the men cut into the lode again last night, the water came away so powerful that it crushed all their timber to pieces for 2 or 3 fms. long; we shall be obliged to stop this end until the 60 gets under it to unwater it. In the 40 fm. level, driving south, the lode is 5 ft. wide, worth about 7l. per fm. In the cross-cut, driving west, in the 28 fm. level, we are still in the elvan; we cut a lode in this cross-cut last Friday about 14 in. wide, mundic and jack, with good stones of copper ore, and very fine chlorite in it; the tribute department is looking very much the same as last reported. We are going to weigh off the 6 tons to-morrow, and we sent off the last of the gossan this morning. We have sent altogether of the gossan 8 tons 20 cwts. 2 qrs., which will make, by Capt. Prince's assaying, 18 ozs. to the ton. Since I have put it through a 6-hole sieve, we have thrown away all the rough that stood in the sieve, which was about 4 tons thrown away, mostly spar.—T. Moyle: March 2.

WHEAL AGNES.—The appearance of this mine is just the same as last report; the lode is still 3 ft. wide, producing very good stones of silver-lead ore. B. Robins: March 2.

WHEAL ANDERTON.—The lode in the 50 fm. level continues fully as good as last reported, or may be said to be improved. The sumpmen have commenced cutting the plat, &c., in the 60 fm. level, which will be done with all possible dispatch, and the lode intersected at that point. The additional stamping-mill will be ready to work this afternoon, and the leader part of the lode as risen, in sinking the shaft, will be put under the usual process, so as to prepare the tinstuff for market.—J. Carpenter: March 4.

WHEAL BARBARA.—In reporting of this mine to-day, I would say, the cross-cut, from the ravine adit end to Williams's shaft, is completed—was holed out on Thursday last; in this shaft we are progressing favourably, the bottom of it is some feet below the adit level. I have set two men to rise in the back of the adit level east, to hole to the Quarry shaft; in this rise we have a very large and promising lode, which will add rather an important feature to the mine.—*Feb. 21.*——I feel pleasure in informing the directors, that the progress in sinking is beyond calculation, and would have been still more so, had it not been for the unexpected plenitude of water. We expect, on Monday, to put down a pump, which will be sufficient to keep the water, until the shaft shall be deep enough for the reception of Mr. Gray's new machine, which would have been completed ere this, but for the great trouble in getting workmen and castings—Williams's shaft is from 10 to 12 ft. below adit; the lode in the rise is large, and of good appearance.—W. H. F. Stephens: Feb. 27.

WHEAL BLENCOWE.—Our wheel is again at work, and we forked the water to the 10 fm. level on Thursday last, which enabled us to resume our workings at the east and west lode, which we recently intersected. We have now opened on it about 6 ft., and its appearance this day is better than it has been before, and it bids fair to realise more than my most sanguine expectations led me to hope for when we first discovered it. Its size is now about 16 in., and will, when opened, if it continues in its present state, readily set at 7s. in the 1l. tribute. The country is also very good, and every indication is of the most promising description. The prospects of the mine were never before so encouraging; and I have a strong hope that the time is not very distant, when our returns of tin will show that Blencowe is a productive mine, and not only so, but a profitable mine.—John Dale: March 2.

WHEAL CARTHEW.—We have driven the adit end 18 fms., which has cost about 14s. per fm. for labour, and have met with three slides, which has disordered the lode; we are now clear of them, and in promising ground for lead; the lode is still split, the leading part is about 1 ft. wide, composed of flookan. Yesterday I was on the mine, and discovered a large caunter lode 2½ ft. wide, near one of the costean pits; it is composed of spar and gossan, and expect we shall cut it in the adit end by the middle of this month—this will be about 9 fms. deep. About 10 fms. to the west of the ore we are now driving on, we have another large soft flookan lode; and, when we meet with the caunter, I think it will be advisable to drive back and cut it, which appears at present to be the most promising to bring home the adit on.—W. Penrose: March 2.

WHEAL CONCORD.—Since writing you this day week, there has not anything new transpired in any of the levels on the lead lode, and, therefore, I beg you will excuse a recapitulation of what I then stated. In rising above the 38 west the lode has become smaller, with less lead in it, and the men have resumed driving the end. The men have ceased operations on the south lode, in the 20; and I purpose setting them to drive the 38, south from the engine-shaft, on Saturday. We have about 9 tons of lead prepared for the market, and have sufficient in sight, in different parts of the mine, to make it upwards of 20 tons a month hence. The back of the 10 is wrought poor, and stopped; we have now facilities for increasing the number of hands in the bottom of the 10, which will immediately be done, in order that as much lead as possible may be raised in the time.—J. B. Clymo: March 4.

WHEAL LOUISA.—Since my last, I am sorry to inform you, that the lode in the 20 fm. level is not looking so well as when I last wrote you, being composed of quartz, flookan, and some particles of lead. To the west of the cross-cut, we have intersected a north and south lode, or branch, yielding tolerably good stones of lead ore.—*Feb. 23.*——I am much pleased to inform you, that we have a prosperous-looking lode in the 20 fm. level; the lode here is very large, yielding fine stones of copper ore—a kindly lode, indeed. I am delighted to see the improvement that has taken place during the last few days.—James Chynoweth: March 4.

WHEAL PROSPECT.—In reporting progress of this mine, and the prospects thereof, I beg to inform you that the depth of the engine-shaft is 31 fms. from grass; a plat is cut at the 27, and driven upon about 6 fms., which lode in the end is about 2 ft. wide, composed of rich copper ore, mundic, peach, spar, and quartz, and a great quantity of water coming from the end, which circumstance leads me to believe it is a large champion lode; and it is my decided conviction, from the appearances in the 15 fm. level (where there are some fine shoots of ore gone down), that by driving about 10 fms. you get under the same, you will have a course of ore, or at all events a great improvement; the lode in the shaft just intersected is in an elvan course, with spots of ore, and other indications it contains are very kindly. By the time you cut the lode again in the 37 fm. level, you will be under the elvan, and where it likely will prove very productive. Considering the general features of the locality of your sett, its situation in a rich and congenial killas for ore, bordering on granite, the extent of the sett, and the several promising lodes it contains, and other facilities for the working a mine, I hesitate not in expressing to you my belief of its being a very valuable one, justifying an unflinching spirit of progress on the part of the adventurers; and vigour, with economy exercised, will, I am persuaded, amply repay you for the capital embarked.—W. Curtis: Feb. 10.——I have great pleasure in informing you we have a still further improvement in our 27 fm. level, particularly since Wednesday, the lode is of a very regular form,

from 15 in. to 20 in. wide, containing fine strong ore and mundic. There are several branches in the end which, either in depth, or going to hill, must fall into the same lode. We are not through the elvan in the shaft yet, but getting on well with the sinking. From the increasing very favourable appearances, which have taken place during the past week, I am led to hope to report very soon something far more favourable.—P. DUNSTAN: Feb. 26.

WHEAL TRELAWNEY.—The lode in the 42 fm. level, north of Phillipe's shaft, is 3 ft. wide, worth 20*l.* per fm.; in the same level south it is 2½ ft. wide, worth 26*l.* per fm. The lode in the 32 fm. level north is 1½ ft. wide, worth 8*l.* per fm.; in the same level south it is 2 ft. wide, worth 15*l.* per fm.; in the winze, sinking under the 32 fm. level north, the lode is 3 ft. wide, worth 20*l.* per fm.; in a winze, sinking under the 32 fm. level south, it is 3½ ft. wide, worth 18*l.* per fm.; the stopes generally are looking well. The parcel of ores computed 68 tons (the produce of one month), sold to the Combmartin and North Devon Smelting Company, brought 15*l.* 16*s.* per ton. We intend putting our new engine to work on Wednesday next.—PETER CLYMO, Jun.: March 1.

[FROM CORRESPONDENTS.]

CARN PERRAN MINE.—There is a very great improvement in driving south-east on the copper lode; a tin lode has been discovered running due east and west, worth from 40*l.* to 60*l.* per fm. Last month there was raised and sold from it 57*l.* 18*s.* worth of tin. There are two other lodes, parallel to the above, within 30 fms. of the eastern end, from the backs of which considerable quantities of tin have been got. In driving west on the tin lode, four copper lodes will be intersected—all of which have produced good stones of copper in a fine goosan on the backs. The agents promise the adventurers a dividend in May of 1000*l.*, after which it is expected the dividends will be regular.

NORTH WHEAL ABRAHAM.—The deep adit level, driving west of the south lode, is looking very well, yielding 1 ton of good ore per fm.

KIRKCUDBRIGHTSHIRE.—We understand 37 tons of ore have been dispatched since last report; and that there is a shade of improvement in both the bottom of Stewart's shaft, and in the end west, in the 30 fm level, since Saturday last.

WHEAL NORRIS.—The engine, and all the materials, having been sold, a special general meeting of the shareholders is convened for the 10th, when a final statement of the affairs of the company will be submitted, and a division of the overplus be made.

WHEAL FRANCO is reported to have much improved within the last few weeks, and more especially in the western part of the mine. There has been a fair demand for shares, and a great many have changed hands lately.

DARTMOOR.—In the advertising columns of this day's Journal may be noticed a prospectus for working the tin lodes in the parish of Sheepstor, by a company, to be denominated "The Dartmoor Consols Tin Mining Company," which extensive and important sett has been taken up on very favourable terms—the lodes have been inspected and reported on by mining agents, of whose efficiency, and practical knowledge of tin lodes especially, we entertain a very satisfactory opinion. By noticing the prospectus referred to, we are reminded, and now induced to enter upon an engagement, which we have for a long period promised ourselves—viz: that of giving a few statistical and important facts relating to Dartmoor, in a mineralogical point of view. This sterile, uncultivated, and undulated tract of country is situate in Devon, and is about 20 miles from north to south, and 10 from east to west—the whole of which appears to be intersected with large and extensive veins, or lodes, of metallic ores. We cannot refer to many mines that have been worked to any great extent or profit within the limits of the Moor; for it appears that tin, and that alone, was the mineral sought for by the ancient miners—but the lodes can be traced continuously for miles on their course, by the workings on the backs, rendering it obvious that the ancient tinners must have been numerous as a body, and that their operations must have been carried over a period of centuries. The mines at present in course of working are the Wheal Friendship Copper, and the Birch Tor Tin, Mines—the former has been worked profitably to the adventurers for a great number of years, whilst the latter is at the present time—holding out prospects of the most satisfactory remuneration to the enterprising proprietors. But as our intention at present is more particularly to go into the ancient history of Dartmoor, as regards its production of tin, tinners, and its Stannaries, we will, in continuing the subject, collate data and materials for an historical account of its mineral geology, and present capabilities, and will thereby endeavour to show that Devonia is not without her deposits of mineral wealth. Cornubia may have enriched her tens of thousands, and millions more may be returned from her bowels; still we believe that, if one tithe part of the capital lost in the ill-remunerative foreign mines were but expended in exploring the mineral districts of Devon, there would be no alarm felt, or a deficiency known, of metal, necessary for the home or foreign markets raised from British mines or British labour. This digression from our original subject, to express a passing thought on home mines, industry, and enterprise, will, no doubt, be deemed pardonable. The earliest histories, or tradition, inform us that the Phœnicians, Romans and Anglo-Saxons were the first who exported tin in their own vessels to Gaul, from the ancient parts of Cornubia, which was raised in that county, and the western parts of the Moor, or Dartmoor; but, in the absence of authentic documents, we cannot go back to a much earlier era than that of the Conquest—though the traffic of the Romans in the same commodity is attested by Diodorus Siculus, and the fact of the discovery of some of their coins in the tin mines. With respect to the Anglo-Saxons, it can hardly be conceived that they were ignorant of the mines, although few, if any, records exist of their proceedings. The Stannaries of Devon once largely augmented the revenues of the earldom, or duchy; and, in John's time, Devon yielded more than Cornwall—the coinage of tin being then found in the former 100*l.* yearly, whilst in the latter it was only 100 marks; and in the 14th of the same reign, William de Worth accounted for 200*l.*—a considerable sum in those days—as the farm of the Devonshire Stannaries: under the earldom of Richard, king of the Romans, they were, perhaps, most flourishing; but, subsequently, they have dwindled away to nothing, after several fluctuations. During the reign of Henry III., Walter de Bathe, sheriff of Devon, accounted to the Exchequer for xxvs. and 1d. as the profits on black mineral; and xxixs., ixs. "*pro minera dealbanda*," or refining the ore and tin sold; in 1337, they amounted to 273*l.* 19*s.* 5¾*d.*; in 1373 to 1375, on an average, to 127*l.*; in 1471, to 190*l.* 17*s.* 11½*d.*; in 1479, to 166*l.* 9*s.* 5½*d.*; in 1604, to 102*l.* 17*s.* 9½*d.*; and from 1814 to 1820, for white tin, to 45*l.* 17*s.* 9*d.* only. By a survey in the 15th of Henry VIII., a charge is entered for profits of coinage, and a rate of 8*d.* per head for 424 *tinners*, being a duty payable by every tinner in Devon for white tin. By another survey in the 44th of Elizabeth, we find charged issues of Stannary Courts of Darmore, 1*l.* 15*s.* 2*d.*; white rent for 97 tinners, 2*l.* 4*s.* 8*d.*; coinage at Chagford, Aisseberton (Ashburton), Plympton, and Tavestoke, 98*l.* 17*s.* 11½*d.*, with a deduction to the Bishop of Exeter yearly for his tenth of coinage and tin in Devon, first granted by John."

MERIONETHSHIRE SLATE COMPANY.—The letter from a shareholder of this company arrived too late to be noticed last week. We think, however, he has misunderstood our observations on the Pantdrainiog Quarry. We have no wish to make any comparison between the two quarries, much less such a one as will be prejudicial to either. Our object was to show that the Pantdrainiog had a "plant" in complete readiness to commence taking out slates immediately; and that the Merionethshire, notwithstanding that it had not a "plant" to *commence* with, but had the delay, trouble, and expense of placing one, had been able to pay 5 per cent. from the profits of the first three months. From their success, we concluded that the Pantdrainiog, from its advantages at *commencement*, was in a better position than the Merionethshire was at *its commencement*. We hope, therefore, we shall be excused from having shown any partiality for either undertaking—on the contrary, we think that there is plenty of room for the success of both. Having made this explanation, we shall let the matter drop.

COOMBE VALLEY SLATE QUARRY.—We have had submitted to us a somewhat lengthy address, delivered by Mr. C. S. Richardson, at a recent meeting of parties interested in the formation of this company—the prospectus of which appears in our advertising columns. We have had pleasure in attentively perusing the document, as containing much information connected with the slate trade, and which we shall place before our readers in an early Number: while we must admit that, if the comprehensive system laid down by Mr. Richardson, the engineer (who is appointed to carry out the works of the company), be conducted in the manner described, there appears every probability that quick returns and good profits must be the result. Mr. Richardson observes, that the Cornish quarries have not met with that patronage they so much deserve, and he has now taken a step that, if supported, will bring those valuable undertakings into repute. The operations of the proposed company are not to be confined to one quarry, or to one locality, but to embrace the manufacture and supply of every description of slate found in the country; and the proposed plan embraces a market for the blue, grey, green, speckled, black, and veiny kinds, the several uses of each described, and where most proper to be placed. The trade with North America, and particularly the Canadas, forms a conspicuous and interesting part of the scheme—showing that, by a mutual operation of British and foreign agency, a trade, at present merely nominal, may easily be converted into a great commercial project. In the building department the introduction of slate for the purposes proposed, are invaluable, and must tend eventually to supersede many descriptions of stone now in general use, on the point of economy, safety, durability, and utility. Mr. Richardson has erected, as a specimen of the practicability of his views, a beautiful open slate staircase at East Temple Chambers, adjoining the offices of the late Anti-Corn Law League, Fleet-street, of 1½ in. slate, consisting of 12 flights of steps, each step guaranteed to sustain a regular weight of 1½ tons—the simplicity of its construction, light appearance, and mechanical arrangement, render it worthy an inspection; where a plan of fire-proofing buildings, and rendering the means of escape easy and certain, are also shown: the Chambers are so constructed that, should a fire occur in one part of the building, the other would remain uninjured—the centre compartments being entirely formed of slate, from the basement to the roof; and the whole has a very neat and unique appearance. We recommend persons interested in these matters to visit this building, as we think they would profit by so doing. The many useful and elegant purposes to which slate may be applied—and the directors appear inclined to exert themselves in causing its adoption—renders it very probable, that the Coombe Valley will rank well with the Merionethshire, Pantdrainiog, and other similar satisfactory investments.

CARMARTHEN CONSOLS MINE (near Carmarthen, South Wales).—We have always looked upon the principality of Wales generally as a grand field for mining enterprise, and those mines which have hitherto been worked to any extent have proved, and still prove, highly remunerative to the adventurers. It now appears that the spirit of mining is evincing itself in many parts of North and South Wales, and especially the latter. Old Mines have been resumed under the most favourable and encouraging circumstances; and we trust that the spirit of speculation, which has led to the partial development of the many promising lodes, will meet with no check to their progressive improvement. We have received the following report of an efficient and practical mining agent appointed by the company to inspect and report thereon:—I now proceed to give you as much of the history of these mines as I have been able to collect with authenticity, together with our present prospects. There are no records of the first working of the mine, except that there was a smelting-house at Carmarthen for smelting the ore; but, judging from the fact, that they never sunk deeper than the water might be kept with a windlass, although there are good courses of ore gone down and also from the absence of any traces of borer-holes, I conclude it was before either machinery or gunpowder was used in mining. The operation of the old miners were confined to the shallow adit; and here they must have had a most productive lode, for the backs are all worked away to within a few feet of the surface. The lode opens as it goes down; and there is no doubt but that, as we sink deeper, we shall have lead in greater abundance. The first person working these mines, of whom there is any remembrance, was a Mr. Rolley: he took the lease in 1791, and commenced the deep adit, extending it as far as the east and west lode; he then drove some distance oh that lode, and continued working it until his death. During the time he worked it, he raised a great quantity of ore, and it proved a very profitable speculation. About 20 years ago a Mr. Bell, from Scotland, worked one portion of the mine with a few men for six months, and returned from 200*l.* to 300*l.* worth of ore; but, being unable to come to terms with the party for the other portion of the sett through which the level came, he was obliged to relinquish it, saying, at the same time, "he was sure he was leaving a fortune behind him:" up to the time of his leaving, he was raising ore on one of the lodes at one-third tribute, under very disadvantageous circumstances. As soon as we erect a whim we can get these works clear, and raise lead in about six or eight weeks. Besides these parties several poor men have at different times, when out of employ, been raising ore on tribute for the proprietor of the land; one pare of men rose 8 tons within a week, not more than 12 ft. deep. This much of the history of the mine may be relied on: with regard to the present prospects, I can only say, they are quite as good as can be wished; as soon as the necessary machinery is erected, the mine may be worked immediately at 100 per cent. profit, and I have no doubt greater as we sink deeper. There is a large quantity of barytes now on the mine, which, I understand, is worth from 4*l.* to 5*l.* per ton, when prepared. This is the matrix of the lead, which in most mines is attle or waste—consequently, the whole of the lode is productive, and we shall be making to a profit of what is usually thrown away. There is a constant supply of water for washing the ore, and it can be conveyed to the port for 2*s.* per ton. On the whole, I do not consider this a speculation, but a safe investment for capital.

LAMHEROOE WHEAL MARIA MINING COMPANY.

The general bi-monthly meeting of the shareholders was held at the offices, 4, King-street, Cheapside, on Thursday, the 4th inst., pursuant to circular. P. DAVEY, Esq., in the chair.

The minutes of the preceding meeting having been read, a question arose as to the regularity with which the meetings had been convened, and certain proceedings adopted, as affected the Cost-book System, under which the company is professedly carried on, which, as involving an important point, adverted to in another column, merits the serious consideration of parties interested in mines, who may be out-adventurers, and which will, we think, act as a useful lesson for the future.

The CHAIRMAN observed, that a question of some importance, with reference to the past proceedings, and also as affected the alteration determined upon with regard to the pursership, would come under their notice, there being no other points of importance to which he had to call the attention of the meeting, beyond the report of the resident agent, Capt. Tabb, and the accounts, which would be then submitted, the latter showing the necessity of a further call. It would be seen, from the reports placed before the meeting, that the progress in sinking had not been equal to the expectations entertained at the previous meeting, there having been difficulties to contend with, which he, however, hoped were in a great measure overcome. He (the chairman) considered that, in the course of two or three months, they would be in a position to drive out a cross-cut north and south—so as to form a communication between the two shafts; and that the future monthly expenditure would not exceed 200*l.* to 220*l.*

Mr. W. SNELL begged to draw the attention of the chairman to the past proceedings of the company, which he contended were not in accordance with the Cost-book System the shareholders professed to follow, and on which the several meetings, with calls, &c., might be assumed were held, and notices issued. It was not his object or intention to raise any question which might lead to litigation—his desire being that everything should be settled in an amicable manner; and, moreover, that such differences as had arisen between the committee and the purser, should be arranged, so as to avoid any dispute, which, while such was calculated to injure the interests of the shareholders, could be productive of no beneficial results to any one party. He (Mr. Snell) wished it clearly to be understood, that, in expressing his opinion on the acts of the company, he did not merely state that which he alone entertained; but such was grounded on the opinions of others, and the decisions arrived at in the Stannary Courts. He contended that certain meetings heretofore held were illegal—the power of convening the same being vested in the purser, who had never been consulted upon, or required to call, such meetings; that the calls made thereat were illegal and informal; and that he felt it his duty, in the position he stood, as the representative of the purser, to make such declaration. He was then prepared to enter into an arrangement with the committee, or the adventurers at large, on the part of the purser, whereby that party should relinquish his appointment.

A SHAREHOLDER wished to learn from Mr. Snell, the "consideration" on which the purser was prepared to "go out," so as to prevent anything unpleasant arising from the difference which unfortunately existed.

Mr. SNELL observed, that there were three points—that the shares held in the mine by the purser should be taken at the market price by the company—that an indemnity should be given to himself, as one of the lessees, for any surface damage that the lord might sustain; and, moreover, a certain sum in consideration of the relinquishment of the office.

The CHAIRMAN observed, that he thought the proper way would be, that Mr. Snell should name some specific sum, as the meeting could then at once determine on either acceding to the terms, or at once rejecting them; to this, however, Mr. Snell demurred; and it was then proposed, that a committee of certain adventurers should meet Mr. Snell at a future day, and settle the matter. In the end, however, Mr. Snell having retired, and a discussion of the subject having taken place, it was understood, that, on that gentleman's return, the question should be at once put as to the claim made on the part of the purser.

Mr. Snell having rejoined the meeting, and the CHAIRMAN having stated that they were prepared to receive any proposition as to terms, it was, after a slight discussion, determined that the shares be taken at the market value, 4*l.* 10*s.* per share; that the indemnity be given as required; and, furthermore, that the sum of 50*l.* be paid to the purser, in consideration of the relinquishment of his appointment. It was further resolved, that a call of 1*l.* per share be made, to meet the forthcoming expenditure. A resolution was also passed, with the view of rectifying any omission or commission, by the purser calling a meeting, to be held on Thursday, the 18th inst., for the consideration of various questions relative to the pursership of the mine, and on other important business. The meeting then adjourned.

Report of the Finance Committee of Lamherose Wheal Maria, to the two-monthly meeting of adventurers, held 4th March, 1847, agreeably to circular, at the secretary's office, 4, King-street, Cheapside, London.

The interval, which has elapsed between the present and the last meeting of the adventurers, on January 7, has not developed any new discoveries on the mine; the report of the committee will, therefore, have to be confined to the financial statement, and to the present state of the two shafts now sinking on the south lodes. It may be mentioned, however, incidentally, as a fact interesting to the adventurers, that, early in February, a lode, having a *south underlay*, was discovered in Wheal Fortescue, adjoining Lamheroos on the east, upon which Capt. Tabb wrote—"We are opening ground on the surface, between D and E lodes, to intersect a south underlayer lately discovered in Wheal Fortescue; it is a strong champion lode, of a highly-promising character, from 5 to 6 ft. wide."—*Vide* CAPT. TABB'S LETTER OF 4TH FEBRUARY, 1847.

As to present state of the shafts, and other operations on the mine, Capt. Tabb's report, dated March 2 (instant), says:—

Lamerhose Wheal Maria, March 2.—I beg to state, in answer to your inquiries, since my last report, we have sunk the engine-shaft 1 fm. 5 ft. 2 in., making the total depth 29 fms. 2 ft. 6 in. We have not been able to sink the south shaft, in consequence of the water. Its present depth is 19 fms. 1 ft. 6 in. We have cut at this shaft a cistern plat, and fixed the cistern in, preparatory to fixing the lift, which will, if the foundry delivers the articles wanted according to their promise, be completed by the latter part of this week; we shall then be in a position to resume the sinking of this shaft with much better advantage than we have yet been able to do. You are aware, that in consequence of the great quantity of water issuing from the lode which we cut in this shaft some fathoms above, and falling to the bottom, and the great length of our sinking lift, our sinking here has hitherto been slow; now, however, these obstacles are overcome, and I confidently look forward to the much more speedy sinking; from the present appearances, after our work is completed, I should think we could sink about 3 fms. per month. I should recommend the sinking of this shaft until it intersects the I. lode. This we may expect to do at about 25 fms. deep, or 6 fms. below its present bottom. At this point, should the I. lode be of a kindly and encouraging character, I should recommend driving upon it east and west, and also drive a cross-cut north and south, in order to intersect the highly-promising and parallel lodes which we know to be close by. I do not consider it advisable to drive and cut from the present bottom of the engine-shaft; because, although it is 30 fms. deep from surface, it is not more than 20 fms. from the adit. This would be too shallow to intersect the lode—at least, with any hope of a satisfactory result. I would, therefore, recommend to sink at the 40 fm. level before intersecting the lodes. I estimate the future monthly cost to be about 200*l.* Our monthly saving in whim drawing, by means of cutting plat at Davey's, is 9*l.* At Haye's shaft, I intend to cut plat immediately, which will be an equal saving. Sinking the shafts is also considerable; but, in consequence of the men being able to sink it faster, the monthly cost will not be considerably lessened. Our operations on the north lode are confined to the working by a pair of tributers on the B lode for tin; their terms expire by the end of April, when we shall have some returns. The appearances of this and the A lode, as far as we have extended upon them, are certainly sufficiently encouraging to warrant the most vigorous and spirited operations. To effect this properly, and at a sufficient depth, would, of course, require an engine; I should think its proper place would be somewhere between the A and B lodes.—JOHN TABB.

By reference to the plan of the south lodes, it will be perceived that, to arrive at 40 fms. deep in the engine-shaft, there is yet to sink upwards of 10 fms., which work, Capt. Tabb now estimates, may be performed in about three months, and, as a corresponding level in the south, or Davey's, shaft will have been reached at about the same time, it is inferred that the driving to intersect all the south lodes may be expected to commence about the 1st June next, and the discoveries then to be made upon the lodes cannot fail to be of an interesting nature to the adventurers. The balance-sheet now presented, shows that when all calls hitherto made are paid, and all liabilities hitherto incurred are discharged (the cost for January month being paid), there will remain a balance of 31*l.* 11*s.* 8*d.* against the mine. The present arrear of calls is 404*l.*, and the adventurers will now have to consider the question of a further call, in order that the operations may be prosecuted with the vigour which circumstances so encouragingly require.

LAMHEROOE WHEAL MARIA—BALANCE-SHEET.

Dr.—Calls as per last balance-sheet, dated Jan. 6, 1847				£8192	0	0	
Interest from George Gold				0	5	6	8192 5 6
Due on account of November cost			£	70	18	2	
" " December cost				18	0	0	
" " January cost				77	6	5	
Committee's acceptance, due 4th March				285	15	0	
" " 1st April				43	7	5	
" " 14th April				117	9	6	612 16 6
Total							£8805 2 0
Cr.—Cost as per last balance-sheet, dated Jan. 6, 1847				£7603	13	9	
December cost sheet				231	9	11	
January ditto including timber				361	15	1	
Secretary's salary, December and January				10	10	0	
Stationery, postages, printing, advertising, &c., December and January				16	8	5	8223 17 2
Arrear on call, 10*s.*, due 7th December			£	159	10	0	
" 10*s.*, due 28th January				244	10	0	404 0 0
Cash at bankers							177 4 10
Total							£8805 2 0

Dr.—Calls, as above	£8192	5	6	Cr.—Cost, as above	£8223 17 2
Balance against the mine	31	11	8		
Total	£8223	17	2	Total	£8223 17 2

CONSOLIDATED TRETOIL MINING COMPANY.

A general meeting (quarterly) of shareholders was held at the offices, 8, George-yard, Lombard-street, on Wednesday, the 3d inst.—such being adjourned from the 26th ult.

ABSALOM BENNETT, Esq., in the chair.

The ordinary proceedings having taken place, the CHAIRMAN begged to direct the attention of the meeting to the peculiar, and, he might say, the painful, position, in which they were placed. It would be observed by them, from the report of the agent, as also that of the directors, that but little prospect presented itself of favourable results by the further prosecution of the mine. It was under these circumstances, that the question was submitted to the meeting, as to the best course to be pursued.

The report of the directors was then read, in which an expression of regret was conveyed, that the prospects of the mine had not improved since the meeting held on the 26th of November last; and, refering to the agent's report, from which it appeared that, since the last meeting, the 80 fm. level east has been driven 13 fms.—the end being 1 ft. big, with a small quantity of ore. The 70 had been driven 14 fms. east of the cross-course, lode 9 to 18 in. big. The 50, east of Henwood's, had been suspended; and also the 50, east of John's shaft. In the 40 fm. cross-cut, south of Russell's shaft, a lode had been taken some three months since, which had been driven on about 9 fms. The report concludes honestly, by stating, that the different parts in the mine have not answered expectation; and that the only chance is deeping the mine some 20 fms.; and also to drive out cross-cut at the 80 or 90, and the 60 fm. levels, which would give the mine a fair trial, but which would, at the same time, occupy 12 months, without which there was no prospect of increasing the samplings—the report, of which this is an abstract, was signed by Capt. H. Williams.

The directors, in their report, proceed to observe, that, under such circumstances, they must leave it to the shareholders to determine the course to be henceforth pursued—while they cannot recommend the further prosecution of the mine. As regards the liabilities, they suggest that the outstanding calls should be at once paid, so as to enable the committee to effect a sale of the materials, if they cannot dispose of the mine in its present state.—A statement of the accounts was read by the SECRETARY, from which it appeared that, on the Dr. side was 2180*l.* 18*s.* 1*d.* balance due to the mine last meeting; 1247*l.* 6*s.* 1*d.*, the costs for Oct., Nov., and Dec., and 47*l.* 8*s.* 10*d.* London charges: the sales of copper ore, &c., during that period amounted to 677*l.* 16*s.* 7*d.*, which, being deducted from the outlay during that period, gave a balance of 616*l.* 18*s.* 4*d.*, which, added to that previously existing, made, together, 2797*l.* 16*s.* 5*d.*—from this was to be deducted 1322*l.* 5*s.* received for calls, leaving 1475*l.* 11*s.* 5*d.* It further appeared, that 689*l.* 5*s.* was due on calls; and that the estimated value of materials was 2050*l.*—while the annual loss on January and February months was 400*l.*; the liabilities and assets showed the former to be 1876*l.* 15*s.* 1*d.*; and the latter, exclusive of value of materials, 689*l.* 5*s.*

After a general discussion, which, we regret to say, was productive of no advantage to the mine, the several resolutions, which appear in our advertising columns, were passed; and thanks having been voted to the chairman, the meeting separated.

BALLESWIDDEN.—At a meeting of adventurers, held at the account-house, on the 27th ult., the following statement of accounts was submitted by the purser, Mr. R. V. Davy, of Penzance:—By wages, November and December, 2966*l.* 13*s.* 4*d.*; coals, 235*l.* 10*s.*; sundry carriage, 84*l.* 13*s.* 7*d.*; sundry rents, 38*l.* 10*s.*; merchants' bills, including 500*l.* for new engine, 1751*l.* 17*s.*; lord's dues, bounders, &c., 378*l.* 16*s.* 7*d.*=5456*l.* 0*s.* 6*d.* By tin sold, 1278*l.* 11*s.* 8*d.*; transfer from profit and loss account, 559*l.* 4*s.* 9*d.*; spales and carriage, 2*l.* 15*s.*; balance to profit and loss, 615*l.* 9*s.* 1*d.*=5456*l.* 0*s.* 6*d.* Resolved, that the next account be held on the mine, on Wednesday, the 28th day of April, at noon.

CARADON WHEAL HOOPER.—A meeting of adventurers was held at Callington, on the 16th Feb., when it was stated that nothing material had transpired at the mine since the report of the 6th [inserted in the Journal on the 13th]; a call of 2*l.* per share was made, payable at the Devon and Cornwall Bank, Launceston; the statement of accounts showed balance December 15, 39*l.* 3*s.*; calls received, 346*l.*=385*l.* 3*s.*—The November costs as 141*l.* 9*s.* 11*d.*; December, 186*l.* 5*s.* 9*d.*—leaving balance in banker's hands, 57*l.* 7*s.* 4*d.*—The purser was instructed to continue enforcing the payment of all outstanding calls

CRADDOCK MOOR.—At a meeting of adventurers, held at Mr. R. Esterbrook's, Liskeard, the 24th February, it was resolved—That the following accounts, leaving balance against adventurers, of 182*l.* 7*s.* 5*d.*, be allowed and passed; and that a call of 30*s.* per share be made, payable immediately at the Devon and Cornwall Bank, Liskeard.—The accounts showed—Labour cost for Nov. and Dec., 201*l.* 3*s.* 10*d.*; materials, 166*l.* 19*s.* 9*d.*; balance of last account, 174*l.* 3*s.* 10*d.* = 542*l.* 7*s.* 5*d.*—Call at last meeting, 360*l.*; leaving balance to end December, 182*l.* 7*s.* 5*d.*—The following report from Capt. James Nance was read to the meeting:—Since our last report, our operations have been confined to the sinking of the north shaft. This shaft is now sunk 28 fms. deep, and the lode in it is about 8 in. wide, and consists of peach, quartz, and good stones of copper ore. In the course of the past two months the lode has varied in size from 12 to 2 in. wide; but is now, and has been in the past week, increasing in size and improving in its appearance—we would recommend the sinking of this shaft 6 fms. deeper, and then drive east through the cross-course, where the lode has generally a better appearance. It will also be worthy of the consideration of the shareholders, whether it be not advisable to intersect the two parallel lodes at this depth, which are now unexplored, and situated north and south of this shaft, about 10 or 12 fms. each. The cost of driving the cross-cuts will be about 12*l.* or 14*l.* per fm.

BESORE MINE.—A meeting of adventurers was held on Tuesday last, when the following accounts were allowed:—To costs, &c., for Nov., Dec., and Jan., 466*l.* 16s. 2d.—By balance at last account, 142*l.* 16s. 8d.; call of 20s. per share, less arrears, 109*l.*; arrears of costs received, 32*l.*; ores sold (less dues), 12s. 9d. = 284*l.* 9s. 5d.: balance due from adventurers, 182*l.* 6s. 9d.

GONAMENA.—At a meeting of adventurers, held at Mr. R. Esterbrook's, Liskeard, on the 24th February, it was resolved—That the accounts, leaving balance against adventurers of 122*l.* 4s. 3d., be allowed and passed; and, that a call of 2*l.* per share be made, payable immediately at the Devon and Cornwall Bank, Liskeard.—The accounts showed—Labour cost for November and December, 331*l.* 1s. 1d.; materials, 163*l.* 9s. 10d.; balance of last account, 12*l.* 3s. 4d. = 500*l.* 14s. 3d.—By call made at last meeting, 384*l.*: leaving balance against the adventurers, 122*l.* 14s. 3d.—The following report from Capt. John Buzza was read to the meeting:—The engine-shaft is from 4 to 5 fms. under the 34 fm. level, sinking by nine men, at 26*l.* per fm.; the east end in the 34, on the north lode, is driven 22 fms.; the lode averages from 15 to 18 in. big, composed of capel, spar, mundic, and ore; the west end, in the 34, is driven 19 fms., the lode is 18 in. big, composed of flookan, capel, and mundic; the cross-cut in the 34 is driven 46 fms.; three branches, or lodes, have been cut; the first 3 fms. from the north lode, 18 in. big; we have not driven on it—it is poor where it is cut; the second lode, or branch, is 3 in. big of ore. The third is also 3 in. big, with ore; we have commenced driving on it. We are expecting to cut the lode we rose the ore on in the 20, in a fathom or two driving; the east adit is driven north 40 fms.; we have cut four lodes—they are from 9 to 12 in. big, and all composed of spar and gossan, no ore.

NANTERROW CONSOLS.—A meeting of adventurers was held at the mines, on the 22d February, when the accounts were presented—showing balance from last account, 284*l.* 10s. 5d.; labour cost for three months ending 31st January, 281*l.* 18s. 6d.; merchants' bills, 124*l.* 19s. 3d.—691*l.* 8s. 2d. By call, 3*l.* per share, made December 4, 456*l.*; by sale of lead, January 28 (less dues, 2*l.* 16s.), 47*l.* 13s. 4d.—leaving balance against adventurers, 187*l.* 14s. 10d.—The accounts, having been examined, were allowed and passed—it appearing, however, that Messrs. Harvey and Co., had been short paid about 500*l.*, owing to many adventurers being largely in arrears on their calls; also, that the shares, which had been reduced in December last to 152, are now proposed to be reduced, by notices of relinquishments, to the extent of 38 more—so that the existing number would be 114; under these circumstances, it was resolved, that, after hearing a report of the mine from Capt. J. Vivian, and Capt. J. Lanyon, in which they were borne out by Capt. Blight, that the workings should be at once discontinued; the materials and such ores as may have been broken, and are worth raising, should be hauled to the surface; and that the whole of such ores, together with all the materials, be sold at as early a period as possible, under the directions of the committee and purser, who are hereby authorised and requested to wind up the concern, taking such proceedings against the defaulters in the Vice-Warden's Court, as they may think most beneficial to the adventurers.

PENVIVIAN.—A meeting of shareholders was held at the George and Dragon Hotel, Bodmin, on Monday, the 1st inst.,—Mr. T. J. RICHARDS in the chair,—when the accounts were presented, showing balance due to purser, 30*l.* 5s. 6d. —It was resolved, that in consequence of a large amount of arrears remaining unpaid, it is the opinion of this meeting, that the easiest way to place the mine on a better footing, would be to cancel the present license granted to Mr. S. S. Crabb, dated Nov. 26, 1845, and obtain a new sett in the names of Messrs. H. Williams, R. Philip, E. Norway, F. A. Knapp, and their co-adventurers: that the materials on the mine be sold, and the proceeds applied towards the liquidation of the liabilities: that notice of these intentions, with statement of accounts, be forwarded to each shareholder, and one week from the date of this notice be allowed for payment of arrears; and only those shareholders, whose calls shall have been paid at that time, will derive any advantage from the new sett; in which their interest will be apportioned, according to their present claim: that this meeting stand adjourned to Monday, March 15, at Mr. Gatty's Town Arms, at six o'clock in the evening.

SOUTH WHEAL FRANCIS.—The following are particulars of the Account held on the 1st of March:—

Cost for December, 1846, to January, 1847		£1883 11 0
Ores sold 3d December	£1499 13 2	
Ditto 31st ditto	2177 14 9	
Tin sold	492 14 6	
Less dues	£ 278 0 2	—3892 2 3
Profit		£2008 11 1
Balance in hand end of November		221 13 5
Making a total of		£2230 4 6

Deduct dividend of 15*l.* per share, 1860*l.*, leaves balance now in hand, 370*l.* 4s. 6d.

SOUTH YEOLAND.—Abstract of mine accounts:—Half of Yeoland Consols cost for Nov. and Dec., 59*l.* 12s. 7d.; bank charge, stationery, &c., 4*l.* 12s. 8d. = 64*l.* 5s. 3d.—Balance of last account, 56*l.* 15s. 6d.: leaving balance against the adventurers, 7*l.* 9s. 9d.

TOKENBURY.—Abstract of mine accounts:—Labour cost for Nov. and Dec., 295*l.* 19s. 10d.; materials, 191*l.* 0s. 8d.; half of Yeoland Consols costs, 59*l.* 12s. 7d. =546*l.* 13s. 1d.—Materials sold, 4*l.* 6s. 10d.; call made at last meeting, 448*l.*; balance of last account, 18*l.* 6s. 11d.: leaving balance against the adventurers, 75*l.* 19s. 4d.

TING TANG CONSOLS.—At a special meeting of adventurers, held at the account-house, on the 26th Feb., the reports of the committee having been submitted, were received. It was resolved, in consequence of there being considerable arrears of costs due to the purser, that he be requested to collect the same immediately: that 5 258rds shares, relinquished by M. Vaughan Pearce, of Truro, be accepted and entered in the cost-book: and that Capt. W. Martin's shares be sold, in conformity to the order of the Vice-Warden of the Stannaries. From the agent's report, we learn that the prospects of the mine are very much improved. In the 120 fm. level, east of John's shaft, the lode is 4 ft. wide, with 18 in. good ore, producing 3 tons per fm., worth 8*l.* per ton, and the price of driving ground reduced from 14*l.* to 8*l.* per fm. In the 140 fm. level, west of John's shaft, the lode is 18 ft. wide, and of a kindly appearance. The 90 fm. level is likewise a large lode, very promising, with branches of rich ore.

WEST CARADON.—At a meeting of adventurers, held at Mr. R. Esterbrook's, Liskeard, on the 24th February, it was resolved—That the accounts, leaving a balance in favour of adventurers of 1644*l.* 15s. 6d., be allowed and passed; also, that a dividend of 3*l.* 10s. per share be declared, payable at the Devon and Cornwall Bank, Liskeard.—The accounts showed—Received for copper ore, 5572*l.* 11s. 9d.; materials, 72*l.* 18s. 10d.; balance of last account, 884*l.* 15s. 1d. = 6530*l.* 5s. 8d.—Labour cost for November and December, 2751*l.* 3s.; materials, 1793*l.* 15s.; lord's dues, 340*l.* 12s. 2d.: leaving balance in favour of the adventurers, 1644*l.* 15s. 6d.

WHEAL HOPE.—At a meeting of adventurers, held at Mr. Esterbrook's, Liskeard, the 25th February, it was resolved—That the accounts, leaving balance against adventurers of 62*l.* 13s. 10d., be allowed and passed: and, that a call of 30s. per share be made, payable immediately at the Devon and Cornwall Bank, Liskeard.—The accounts showed—Labour cost for September to December inclusive, 198*l.* 1s. 10d.; materials, 27*l.* 3s. 11d.; balance of last account, 55*l.* 8s. 1d. = 280*l.* 13s. 10d.—By call made at last meeting, 218*l.*: leaving balance to end Dec., 62*l.* 13s. 10d.—The following report from Capt. W. Taylor was read to the meeting:—The bottom level east on the old lode is now extended 45 fms. from shaft, the lode from 4 to 5 ft. wide; it is composed of capel, mundic, greens, and iron, spotted with yellow and grey copper ore. This end we expect will come into the killas strata very soon, and will also intersect another lode bearing nearly north and south, on which we sunk 9 ft. in the adit, and found good stones of ore. The horse lode has been extended, on in the adit level about 125 fms., and we have found good stones of ore in several places. This lode varies in width from 1 to 3 ft.; but in the last few fathoms it has been small, from 6 to 9 in. wide, consisting of good spots of grey copper ore, mundic, and kindly gossan, and has at present a very kindly appearance. The adit thus extended north and south on the course of the lode is very soon expected to intersect an east and west lode, where we hope to have a bunch of copper.

WHEAL MEXICO.—A meeting of shareholders was held at the New Inn, Callington, on Wednesday, the 24th February,—Rev. E. T. MAY in the chair.—After the usual preliminaries, and some desultory conversation, the following resolutions were passed:—That the accounts, having been examined, be allowed and passed; and that the purser, having in hand a balance of 10*l.* 12s. 2½d., shall make a final dividend of it among those who hold the 251 shares on which the 4th call was paid; and, that the lease and agreement, granted by Mr. North, and under which the Wheal Mexico Company carried on their operations, be forthwith surrendered to him. The last resolution was complied with, by cutting off the seal and sending the deed to Mr. North, by the late agent of the mine; and, in pursuance to the first resolution, the shareholders have been paid 10d. per share on the number registered in their name, which, with the first dividend of 1*l.* per share, makes the amount returned 1*l.* 0s. 10d. per share. —[We are requested, by several distant shareholders, to express their acknowledgements to Mr. W. May, the purser, for the urbanity and attention which they have every received from him, as well as their entire approbation of the clear and satisfactory manner in which the accounts have been kept, and, at the same time, to express their regret that the adventure had not proved so fortunate, as to allow him a remuneration in accordance with his merit and services.]

WHEAL SPEARN.—At the usual three-monthly meeting, held at the account-house, in St. Just-in-Penwith, on the 27th Feb., the statement of accounts was submitted by the purser, Richard Pearce, Esq., of which the following is an abstract:—Labour cost, including carriage for the three months, ending 31st Dec., 1846, 1209*l.* 19s. 5d.; coals brought from on ship-board, 56*l.* 7s.; merchants' bills for materials, 209*l.* 15s. 5d.; stamps, rent, rates, &c., 45*l.* 11s. 7d.—1321*l.* 13s. 5d. Amount of tin ore sold up to this day, but raised previously to the end of December, 1846 (highest price, 58*l.* 10s. per ton), 2099*l.* 12s. 7d.: leaves balance in favour of the adventurers, 585*l.* 7s. 9d. The foregoing accounts having been allowed, it was resolved, that the purser be authorised to make an immediate dividend to the adventurers of 3*l.* per each 128th share, making 384*l.*; leaving a balance to be carried to next account, in favour of the adventurers, of 201*l.* 7s. 9d. The total amount of calls made on the adventurers, has been 1280*l.* dividends declared, including the above, amount now to 1440*l.*, being 160*l.* beyond original outlay; to which should be added the greatly increased value of the mine itself, as well as of the steam-engines and other materials, in addition to the balance now in hand.

WHEAL MARY CONSOLS.—Abstract of mine accounts:—Labour cost for Nov. and Dec., 549*l.* 9s. 1d.; materials, 397*l.* 3s. 2d.; balance of last account, 732*l.* 14s. 7d. = 1679*l.* 6s. 10d.—Received for materials sold, 40*l.* 15s. 3d.; call made at last meeting, 1024*l.*: leaving balance against adventurers, 614*l.* 11s. 7d.

WHEAL SISTERS.—Abstract of mine accounts:—Labour cost for Nov. and Dec., 835*l.* 2s. 4d.; materials, 353*l.* 5s. 6d.; lord's dues, 77*l.* 18s. 6d.; balance of last acct., 167*l.* 3s. 6d. = 1433*l.* 9s. 10d.—Received for copper ore, 1264*l.* 10s. 11d.; materials sold, 15*l.* 5s.: leaving balance against adventurers, 153*l.* 13s. 11d.

WHEAL ACLAND.—A meeting of adventurers in this mine was held at the Royal Hotel, Truro, on Wednesday last, when the following accounts were passed, and a call of 1*l.* per share ordered, for paying the balance and for the future working of the mine.—To balance due to purser on the 1st of July last, 4*l.* 10s. 6d.; costs, &c., from July 1st, 1846, to Jan. 31st, 1847, 139*l.* 19s. = 144*l.* 9s. 6d.—By call made in July, 128*l.*; balance due to purser, 16*l.* 9s. 6d.

WHEAL TREHANE.—A general meeting of shareholders was held at the mine, on Monday, March 1—J. SAMBELL, Esq., in the chair.—From the accounts which were presented, and passed, it appears, that when the amount for the silver-lead ore, sold on the 25th ult., is received, a balance of about 500*l.* will be in hand. The parcel sold was 48 tons, amounting to about 880*l.*; and a good parcel of clean lead, which has been raised, is again ready for the market; and, from present appearances, there is every prospect of as much for the next two months as the last; and, but for the scarcity of water, more would be ready. A dividend of 1*l.* per share was declared, and it was resolved—That a dresser be appoited at 3*l.* 10s. per month salary, such dresser to be selected by Capt. Bryant. A vote of confidence was passed to Capt. Bryant for his care and management of the mine since his appointment; and a vote of thanks was given to Mr. Sambell, for his able conduct in the chair. The following report from Capt. John Bryant was read to the meeting:—Philps's shaft is sunk 9 ft. before the 30 fm. level, the lode 3 ft. wide, worth 8*l.* per fm.; the 30 fm. level is driven north from the shaft 26 fms.; the lode varies from 1 ft. to 3 ft. wide, and worth, on an average, 6*l.* per fm.; the present end is worth 12*l.* per fm.; the ground has been very easy for driving, and the backs can be stoped for less than 20s. per fm.; we have sunk a winze 12 fms. north of shaft, from the 20 to the 30 fm. level, where the lode will pay well for taking away; the 30 fm. level is extended south of the shaft, within a few fathoms of the boundary; we have sunk a winze close to the end, 5 fms. 5 ft. through a good lode, which I expect is as deep as Trelawney 22 fathom level. We have suspended driving the end of the 20 fm. level north, as it is unproductive at present; 5 fms., however, near the end produced some very good ore, rich in silver, where I have set a stope; I do not think well of driving this end farther just now, not expecting a great quantity of ore above this level northward, as the gossan makes deeper in the north than in the south part of the mine; and in case there should be ore in the back farther north in this level, it can be taken away by stoping from the back of the 30 fm. level; the stopes above this level (20), south of the shaft, are 4 fms. high, the lode is 1 ft. wide, worth 10 fm.; I have dialled the workings, and laid out the same on paper, and find the lode will reach much deeper in this sett than the most sanguine expected; supposing the lode to take the same course as it has the 40 fms. driven, it will be 65 fms. long in the 30 fm. level; and, taking the underlay to be 1 ft. in a fm. (which is something more than it will average in the last 9 fms. sunk), it will be 32 fms. long, at 180 fms. depth.

GEORGIA TIN MINES.—We are well pleased to learn, that the sett comprising these mines, which are situate near St. Ives, has been secured by an influential party in London, and likely to be worked with that spirit which the adventure warrants. The extent of ground is, we believe, nearly a mile square, or at least 700 fms. on the run of the lodes, and equally so in a north and south direction. It is hardly necessary to observe, that the contiguity of the sett, to those of Rosewall Hill, St. Ives Consols, Balnoon, Reeth Consols, Wheal Mary, and the well-known Ding Dong, holds out expectations which, with prudent outlay and application, will, doubtless, return to the adventurers that which they contemplate—"great and lasting profits." The mine is divided into 2048 shares, and carried on upon the Cost-book System—meetings of the adventurers being regularly convened, and the committee of management having no power to make calls, or to incur expenses beyond such as are ordered and approved by the body of shareholders. Reports upon the mine have been made by several mining agents, which appear of a satisfactory nature, and to which we shall refer in an early Number.

MINING IN THE MARIA DISTRICT.

SIR,—It happens rather unfortunate for "A Friend to the Mining Interest," that the observations of "An Adventurer" should appear in the same paper with his reply to my remarks, as, instead of assisting, they clearly contradict each other. The former has for the last month been strenuously endeavouring to prove the superiority of South Maria over nearly all the setts in the neighbourhood, owing principally to its contiguity to the Great Maria Consols; whilst the latter, instead of bearing him out, arrogantly asserts, that it matters little to the adventurers, whether the Maria lode, or any part of it, be in the sett or not—so that, instead of gaining credit for his exertions, it would seem that his own party consider his labours unnecessary. It cannot, however, fail to be very satisfactory to his, and the company's feelings, to read the flattering report furnished by "An Adventurer"—viz.: that they have not only the most beautifully congenial and metalliferous killas in the shaft, but *abundance* of ore, and this, too, *without a lode*: this really appears so very strange, that with all due reverence for his veracity, he must excuse me, if, in this instance, I am so bold as to doubt the correctness of his assertion. Respecting the management of the mine, he refers me to Troy, as being besieged nine years, and captured in the tenth—this is very true; but it is equally true, that if the besieging army had not on that occasion used more exertions than the South Maria Company have for some years past, Troy would never have been captured. So much for "An Adventurer." I now return to "A Friend to Mining;" but, before entering fully into the contents of his lengthened reply, I must remind him, that I never accused him of an intentional deviation from the truth; nor did I, as he asserts, lay claim to infallibility. Your readers will have perceived the correctness of my assertion, as to the situation of Wheals Fortescue and West Maria, and the consequent weakness of his claim to the name of the latter—indeed, he admits as much himself; but in making this admission, he again lays himself open to contradiction, by stating that I said the Maria *riches* pass through the before-named setts: this certainly does look like an intended misapplication of my meaning, as no such words can be found in my letter. What I stated was, that from the probable course of the Great Maria *lode*, the present West Maria was properly named. Having, in my former letter, proved that South Maria has no just pretensions to the name of West, I once more meet him on his own ground, as to the direction of the dial at Wheal Josiah: I admitted in my last, and still admit, that the dial *does* point west through South Maria—and from this he concludes, that this lode runs into his sett; but it is not the case, as the Great Maria lode runs considerably north of west, and is, moreover, unquestionably heaved by the cross-course named in my last. He next observes, that there are five lodes in the bed of the river, and asks me where they are gone to?—I answer, that they are most likely to be found in the Great Maria sett, and, for aught I know, may be very kindly lodes; but the idea that they are as promising as the other extraordinary lodes discovered in that sett, is preposterous. He now launches out into a long rigmarole statement as to the geographical position of his sett; but these remarks are altogether superfluous, as I have not attempted to deny its westerly direction, but in my last pointed out the real position of the mine. He winds up his course of sophisticated arguments, by stating that my assertion as to the *working* of the mine for the last nine years, is *untrue*: here, Sir (and this is the only point I concede to him), I acknowledge my error; I should have stated that some of the old adventurers have been in the habit of paying *calls* for the last nine years, but that little or no *work* has been done. In his first letter, with reference to the management of the mine, he states that, "unlike some companies who spend a mine at the surface, before they find one in depth, they proceed with due care," &c.: if the money expended at the surface at South Wheal Maria within the last few months is any criterion, this point may also be doubted; I would ask him, where is the WEIR? In conclusion, I have to inform him, that his taunt as to the spectacles is entirely misplaced; I have no interest in any of the mines near the Great Maria—so far I am unbiassed, and my remarks on this subject have been made solely for the purpose of setting South Maria in a proper position with her neighbours: I should be glad to hear of her success, as well for the sake of the adventurers as the public at large; and, from the respectability of the present company, and the recent appointment of a bustling agent of considerable experience, it is to be hoped they will make up for lost time, and ultimately have a profitable mine.—W. Y.: *Twistock, March* 1.

SOUTH MARIA MINE.

SIR,—Your printer has made sad work with my letter respecting South Maria Mine, partly, no doubt, because it was written in haste, and because my handwriting is none of the most legible. In the 9th line the word "ores" is introduced, which destroys the sense; it ought to be, "the ground produces yellow copper ore." In the 16th line is printed the vein, instead of the river, or Tamar—"across the river from Great Maria," is intelligible enough. And immediately afterwards is printed, "and *several* seen in the wheel-pit"—what a palpable absurdity! I stated that a lode (or saunter) had been seen in the wheel pit. In the last line but one is printed "idea;" but I wrote either "saying," or "axiom:" for we, none of us, have the power of fathoming the ideas of other men, unless they be expressed in words. I consider that an underlie, not *underlay*, is the right expression.—AN ADVENTURER: *March* 1.

[We are at all times anxious to correct any errors which may inadvertently have occurred in the Journal, and always regret their appearance; but, we must put it to some of our correspondents, if the MS. forwarded does not render it at least a matter of some difficulty to decipher the exact words, if not the meaning, intended. We value the contributions of our correspondents too highly to hesitate at trifles, and do not intend these observations as a complaint or rebuke, but rather as a general explanation of the cause of any *errors* which may appear.—We have referred to the letter of "An Adventurer," and find that the word *grey* appears in his copy, as we printed it; also, that "and several seen in the wheel pit," is very clearly written by him. The errors for which we are blameable are—substituting the words *vein* for *river*, and *idea* for *axiom*. But authors as well as printers, are but mortals, and equally subject to err.]

THE COPPER TRADE.

The following is a copy of the petition presented to the House of Commons by Mr. Muntz, from the merchants and manufacturers of Birmingham praying for the repeal of the duties on copper ores:—

"Your petitioners are deeply interested in the continuance of the trade of importing copper ores into Great Britain from foreign parts, which trade has increased from 2550 tons of ore, which was the quantity imported in 1831, to 55,720 tons of ore, of the value of nearly 900,000*l.*, in the year ending 5th January, 1844, and which has been the means of securing to this country the manufacture and supply of full three-fourths of all the copper consumed in the world.

"In consequence of the duties first imposed by the tariff of 1842, on foreign copper ores imported into Great Britain, the trade in foreign copper ores to this country has been, and is likely further to be materially diminished. To prevent so great an injury, your petitioners pray your hon. House to repeal these duties, and they respectfully offer the following statements (which they are prepared to support by evidence) in support of their prayer.

"Chili, which produces abundance of copper ores, has, for many years, been an extensive consumer of British goods, but, not being a manufacturing country, possesses few means of repayment except by her copper ores.

"The British manufacturers and exporting merchants derive great advantage from the foreign copper ore trade, inasmuch as it forms a remittance for British manufactured goods sent to the countries from whence the ores are imported. The want of a return of this nature is felt seriously by the German, French, and American merchants and manufacturers, and prevents their competition with the merchants of this country, severe as it actually is, from being as successful as it probably would be without the advantage possessed by the latter in the shipments of copper ores.

"The diminution, and probable destruction of this important branch of trade, is viewed with alarm by your petitioners, who are deeply interested in its maintenance; and to avert such an evil, they humbly pray your honourable House to repeal the duties on foreign copper ores imposed by the tariff of 1842.

B. COOK, brass-founder,
STOCK AND SHARP, merchants,
W. C. ALSTON, manufacturer, &c."

SHATTERFORD COAL AND IRON MINING COMPANY.—On a reference to our advertising columns, it will be seen the above company has been projected to work the coal beds on the Shatterford estate, in the county of Stafford, which have already been proved, and we understand are of an excellent quality, and in great demand, and when carried out to the extent proposed, will, doubtless, prove equally beneficial to the shareholders and the public—the latter of whom appear to entertain so favourable an opinion of the undertaking, that we are informed the majority of the shares have been already applied for, which is the cause of the limited time allowed for applications to be made.

ACCIDENTS.

Gateshead.—J. Featherstone, jun., of Crook, was killed by a fall of stone while driving a horse in an ironstone quarry at Greenhead.

South Elswick Quarry.—J. Gibb was killed while employed here.

Rhodes' Bank Colliery, Oldham.—J. Haigh was killed at Messrs. Lees and Co.'s.

Kingswinford.—S. Petty was killed at Mr. J. Cartwright's Colliery.

Darlaston.—D. Rollison was much injured at Messrs. Addenbrooke's Colliery.

Portobello.—As F. Taylor was employed at the bottom of a pit shaft, a skip, loaded with bricks, overturned, by which he was killed.

Merthyr.—J. Richards was severely injured at the Ponnydarran Works.

Prestwood Colliery.—J. Flavell and J. Morris were killed by a fall of coal.

Wednesfield Heath.—W. Powell and W. Maraden were killed in the British Iron Company's Colliery.

Wigan.—S. Cutchley has died from the effects of the injuries he received from an explosion at G. Nuttall's Colliery, Ince, on the 28th February.

COAL MARKET, LONDON.

PRICE OF COALS PER TON AT THE CLOSE OF THE MARKET.

MONDAY.—Adair's Main 18 6—Carr's Hartley 17—Davidson's West Hartley 17—Grace's Hartley 15 6—Hasting's Hartley 17—New Tanfield 15—North Wylam 15 6—Watson 15 6—Walker 17—Eden Main 18 6 to 18 9—Belmont 18 9—Braddyll's Hetton 19 9—Bell 19 3—East Hetton 17 3—Haswell 20 6—Hetton 20—Keepier 18 9—Lambton 19 9—Richmund 18 9—Stewart's 20—Whitwell 18 6—Cassop 19 6—Hudson's Hartlepool 19 to 19 6—Heugh Hall 18 6—Kelloe 19 9—Cowndon Hartley Steam 15—Adelaide Tees 19 6 to 19 9—Burlington Tees 16 9—Denison 18—Gordon 16—Seymour Tees 19—West Cornforth 18—Cowpen Hartley 17—Derwentwater Hartley 17—Howard's West Hartley Netherton 17—Sidney's Hartley 17.—Ships at market, 176.

WEDNESDAY.—Bate's West Hartley 17—Chester Main 16 6—Davidson's West Hartley 17—Hasting's Hartley 17—North Percy Hartley 17—Original Tanfield 14 6—Ord's Redheugh 14 9—Ravensworth's West Hartley 16 6—Tanfield Moor 18 6—Wylam 17—Wall's End Bewicke and Co. 17 to 17 9—Barnard's 16—Brown's 15 6—Brown's Gas 14 6—Clennell 16—Clarke and Co. 16—Hedworth 16—Hilda 16 6—Killingworth 17 3—Northumberland 16 3—Walker 16 9—Eden Main 18 3 to 18 6—Braddyll's Hetton 19 9—Bell 19 3—East Hetton 17 3—Haswell 20 6—Hetton 20—Keepier 18 6—Lambton 19 9—Russell's Hetton 19 6—Richmund 18 3—Shotton 19 6—Stewart's 20 3—Whitwell 18 6—Hudson's Hartlepool 19—High Thornley 18—Kelloe 19 3—Brown's Deanery 18 6—Gordon 16—Seymour Tees 19—South Durham 18 6—Tees 20—West Cornforth 18—Cowpen Hartley 17—Derwentwater Hartley 17—Howard's West Hartley Netherton 17—Sidney's Hartley 17—Carr's Hartley 17.—Ships at market, 215.

FRIDAY.—Adair's Main 18—Bate's West Hartley 17—Buddle's West Hartley 17—Carr's Hartley 17—Chester Main 16 6—Davison's West Hartley 17—Dean's Primrose 18 6—Dipton Tanfield 14—Hasting's Hartley 17—Holywell Main 17—North Percy Hartley 17—New Tanfield 14 9—North Pontop 14—Original Tanfield 14 6—Ord's Redheugh 14 9—Ravensworth's West Hartley 17—Tanfield Moor 18—West Hartley 17—Wall's End Bewicke and Co. 17 9—Barnard's 15 6—Brown's 15 6—Brown's Gas 14 6—Bell and Brown 17 6—Gosforth 17 6—Hilda 16 6—Hotspur 16 3—Killingworth 17—Northumberland 16 3—Wharncliffe 17 6—Eden Main 18 6—Belmont 18 3—Braddyll's Hetton 19 6—Bell 19 3—East Hetton 17 to 17 3—Framwellgate 16 6—Haswell 20 6—Keepier 18 6—Lambton 19 9—Russell's Hetton 19 6—Richmund 18—Shotton 19 3—Stewart's 20 3—Cassop 19—High Thornley 17 9—Denison 17 9—Gordon 16—South Durham 18 6—Tees 20—West Tees 16 3—Cowpen Hartley 17—Derwentwater Hartley 17—Howard's West Hartley Netherton 17—Sidney's Hartley 17.—Ships at market, 172.

RAILWAY TRAFFIC RETURNS.

From these returns, it will be seen, that the amount of traffic for the last week, on nearly 2730 miles of railway, was 123,007*l.*, thus accounted for:—87,884*l.* for the conveyance of passengers only, 32,218*l.* for the carriage of goods, and a remainder of 26,906*l.* for passengers and goods together, not respectively apportioned; being an increase over the corresponding week of last year of 8260*l.*, when the mileage was about 1,920.

Name of Railway.	Lgth. Rway.	Present actual cost.	Last Div.	Traffic Returns. 1847	1846
Arbroath and Forfar	15	£142,900	3 p. c.	£ 221 0 0	£ 173
Chester and Birkenhead	15	656,293	2½	636 3 7	680
Dublin and Drogheda	35	699,248	3½	683 10 1	625
Dublin and Kingstown	6	349,736	9	881 5 7	886
Dundee and Arbroath	16½	156,323	6	280 12 10½	275
East Lancashire	28	814,417	—	675 9 10	—
Eastern Counties	104½	6,813,026	7	9692 15 10	6314
Eastern Union	17	227,253	—	477 0 0	—
Edinburgh and Glasgow	46	2,112,136	6	3225 10 4	2843
Glasgow, Paisley, and Ayr	53	1,201,391	7	2057 11 0	1849
Glasgow, Paisley, & Greenock	23	529,427	2	969 9 5	794
Great Southern and Western	56½	1,343,719	—	1080 0 1	—
Great Western	241	8,885,606	8	15696 10 2	15300
Ipswich and Bury	26½	203,765	—	396 0 0	—
London and North Western	378½	18,042,004	10	34801 18 4	35017
London and Blackwall	4	1,081,273	1½	728 4 7	727
London, Brighton, & South Coast	112	3,399,230	5	5223 0 0	3418
London and South-Western	127	3,468,544	9	5384 13 9	5784
Manchester & Leeds	117	3,770,750	7	7286 11 8	5414
Manchester, Sheffield, & Lincoln.	49½	1,533,221	5	1759 4 6	1569
Midland Company	329½	7,862,274	7	16575 14 0	14876
Newcastle and Berwick	9	1,184,079	8	503 12 1	504
Newcastle and Carlisle	65	1,184,080	3	1948 12 5	1875
Norfolk	70½	985,079	6	1515 19 2	1256
North British	73½	1,459,950	—	1378 5 4	—
Preston and Wyre	30	432,014	2½	563 18 1	493
Shrewsbury and Chester	15	354,945	—	321 7 9	—
South Devon	20	778,976	5	427 7 8	—
South-Eastern	140	5,260,816	3½	5760 1 2	5043
Taff Vale	30½	690,229	6½	1402 19 8	939
Ulster	25	258,363	5½	773 5 3	643
York and Newcastle	183½	1,712,217	9	7696 8 11	6236
York and North Midland	162½	2,483,256	10	5372 3 3	4457
FOREIGN RAILWAYS.					
Dutch Rhenish	57	—	—	3825 0 0	—
Northern of France	260	—	4	6670 0 0	—
Orleans and Bordeaux	72	599,040	4	2409 0 0	—
Paris and Orleans	82	2,082,916	9½	6607 0 0	5550
Paris and Rouen	85	2,082,916	8½	6132 0 0	5229
Paris and Versailles (left bank)	—	—	—	1525 0 0*	—
Ditto (right bank)	—	—	—	5742 0 0*	—

* Last monthly return.

Current Prices of Stocks, Shares, & Metals.

STOCK EXCHANGE, *Saturday morning, Eleven o'clock.*

Bank Stock, 7 per Cent., 204½ 5½
3 per Cent. Reduced Ann., 90¾ ¼
3 per Cent. Consols Ann., 90¼ 90
3 per Cent. Annuities, —
3½ per Cent. Ann., 99¼ ¾
Long Annuities, 9¼
India Stock, 10½ per Cent., 251 50
3 per Cent. Consols for Acc., 90⅜ 90
Exchequer Bills, 1000*l.* 1¼d., 6 3 6 pm.

Belgian Bonds, 4½ per Cent., 95½
Dutch, 2½ per Cent., 58⅜ ½
Brazilian, 5 per Cents., 86½
Chilian, 6 per Cents., 95 3
Mexican, 5 per Cents., 22
Spanish, 5 per Cents., 23½ 3
Ditto 3 per Cents., 34½ ½
Portuguese, 4 per Cents., 34
Russian, 5 per Cents., 109½

MINES.—The mining share market this week has assumed a very satisfactory appearance. The transactions in many mines have been large, with an advance upon former quotations. There has been a demand for shares in several mines, in which the holders have declined offers at a considerable advance above former sales, and the market appears firm. Several mines have declared dividends, and every post brings intelligence of improvements having been discovered in the several mining districts of the United Kingdom. From the amount of business done this week, and the number of shares in good mines sought for, we may fairly presume on having a firm and improved market.

North Roskear has considerably advanced since our last; the mine is looking well, and a dividend is fully expected will be declared at the account-meeting on Monday next, with a better one on the next, which will be the 10th May. North Pool has been in demand at an advance; also Comfort, and Treviskey and Barrier. South Wheal Francis has been in demand at rather better prices—the meeting, held on the 1st March, declared a dividend of 15*l.* per 124th share, with a balance of 370*l.* in hand.

West Caradon meeting, held the 24th inst., has declared a dividend of 3*l.* 10s. per 256th share. At Wheal Trehane account, held on Monday last, a dividend of 1*l.* per 256th share was declared, with a balance of 300*l.* after payment of the dividend, and about 28 tons of silver-lead ores dressed, and in course of dressing. Carn Perran is reported to have improved, and buyers are found, in consequence of her shortly being in a position of paying regular dividends. Ting Tang have been in request, from the circumstance of a discovery in the bottom level.

We learn from the country, that much business has been done in Devon and Courtenays, Old Harrowbarrows, Wheal Russells, Wheal Francos, and Wheal Andertons.

From the general improvement, which has taken place in Herodsfoot Mine, a great many shares have changed hands, and there is every probability of much business being done in them. Great Wheal Michells have also been in request, at an advance upon last sales.

We also learn that several large transactions have taken place in West Providence and West Wheal Maria Tin Mine, and buyers are still to be found. Pennants have been much sought after, at an advance upon former quotations.

Shares in the following mines have changed hands during the week:—North Roskear, Holmbush, Mendip Hills, Wheal Tremayne, West Treasury, Herodsfoot, North Pool, South Wheal Francis, East Tamar, Gwinear Consols, Wheal Russell, Wheal Benny, Lamherooe, Silver Valley, Bedfords, West Wheal Jewel, Comfort, Great Wheal Michell, Condurrow, Stray Park, Trewollack, Bucketts, Ting Tang, Wheal Trelawney, &c.

The foreign share market has also been very lively, especially in the Australian shares, a vast number has changed hands, and a very rapid rise took place; but a reaction took place yesterday, and the quotations at which they left off at the day before were not maintained yesterday. Asturian, Macaubas and Cocaes, and Altens, have been done, as well as Bolanos scrip and loan notes.

RAILWAYS.—The share market during the week has been very changeable: in the former part there was a tendency to improvement, and a few purchases were made, both in old shares and scrip, which caused a sudden rise; but for the last two days business has been extremely limited, and the jobbers of Capel-court look down. At Liverpool, Manchester, Birmingham, Bristol, and Leeds, the transactions have been very confined, but prices generally have been maintained. This depression may, in a great measure, be attributed to the unsettled state of the money market since the conclusion on Monday of the 8,000,000*l.* loan Government contract, for the relief of Ireland, entered into by the monied firms of Messrs. Barings and Rothschilds, and the result of the new proposed Government railway bill in the House of Commons.

MEETINGS.—BIRMINGHAM AND OXFORD JUNCTION, AND BIRMINGHAM, WOLVERHAMPTON, AND DUDLEY: a notice of which appears in another column.—NORTH WALES: ordinary half-yearly. From the report it appeared that the total expenses incurred since the passing of the Act was 3896*l.*; the liabilities of the company, 12,889*l.*, of which sum Sir John Rennie claimed 10,468*l.*, and Mr. Brocas 1843*l.*—LONDON AND MANCHESTER DIRECT (Remington's): to consider the dissolution of the company; when there appeared, for the dissolution, 710 shares; against it, 18,085: for bankruptcy, 1080; against it, 16,348 shares.—BEDFORD: half-yearly; being formal, the line having been amalgamated with the London and North Western; total receipts from the commencement, 59,390*l.*; balance, 6595*l.*—BLACKBURN, DARWEN, AND BOLTON: semi-annual; from the progress made, the directors hope to open the line from Blackburn to Darwen in May or June, and the entire line early next year. They recommended the amalgamation of this company with the Blackburn, Clitheroe, and North Western Junction. The balance in hand is 23,933*l.*—NORTH STAFFORDSHIRE: half-yearly; a further call of 2*l.* 10s. per share, payable on the 10th May, was announced; and that the meetings should be hereafter held in Feb. and Aug.: expenditure, 774,004*l.*; balance in hand, 11,933*l.* Meeting made special—when the draft of a bill now before Parliament, for authority to raise 350,000*l.* for the purposes of the consolidated act, was read and approved of.—LEEDS AND THIRSK: half-yearly; the contracts from Leeds to Thirsk were now let and progressing; that portion from Thirsk to Ripon is expected to be open for traffic in July or August, which will be extended to Stockton and Hartlepool. Balance in hand up to 31st Dec., 182,345*l.*—FURNESS: half-yearly; a dividend of 4 per cent. on the last half-year was declared.—SOUTH DEVON: Ordinary half-yearly; the line to Totness will probably be open early in the spring, and to Torquay in the course of the year. Mr. Brunel had announced that he was prepared to enter into a contract for the completion of the Cornwall in three years.—LONDONDERRY AND ENNISKILLEN: half-yearly; the portion of the line from Derry to Strabane is finished: receipts, 114,746*l.*; expenditure, 110,776*l.*; balance, 3969*l.*—GREAT NORTHERN: first half-yearly meeting; the seal of the company was affixed to the register; balance, 432,575*l.*—NORTH BRITISH: half-yearly; balance, 24,840*l.*—a dividend of 12s. 6d. was declared.—OXFORD, WORCESTER, AND WOLVERHAMPTON: half-yearly; balance, 199,440*l.* 3s. 11d.—COVENTRY, NUNEATON, LEICESTER, AND BIRMINGHAM: half-yearly; the line has been leased to the London and North Western.—BIRKENHEAD, LANCASHIRE, AND CHESHIRE JUNCTION: half-yearly; balance in hand, 57,767*l.*—GLASGOW, PAISLEY, KILMARNOCK, AND AYR: half-yearly; there is an increase in the receipts of 7000*l.* with last year; a dividend at the rate of 7 per cent. was announced, the directors having at their disposal the sum of 39,135*l.*

MANCHESTER AND SOUTHAMPTON RAILWAY.—This case, which has excited so much interest in the railway world, was decided yesterday. After deliberating upon it for a considerable time, the committee decided that the Standing Orders had not been complied with—and the bill is, therefore, lost.

SECOND READINGS.—The following bills were read a second time last night, and ordered to be committed:—Direct London and Portsmouth, Brighton and Chichester, London, Brighton, and South Coast, and London and South Western, Newcastle and Berwick, York and North Midland, York and Newcastle, Edinburgh and Northern, and Great Northern.

RAILWAY CONTRACTS DUE NEXT WEEK.—Caledonian and Dumbartonshire Junction—6500 tons of malleable iron rails; 1850 tons of cast-iron chairs; 70,000 sleepers, March 10; East Lancashire—ten warehouse cranes, and one 10-ton crane, and iron girders for bridges; Glasgow, Dumfries, and Carlisle—works, March 15

THE PROPOSED GOVERNMENT RAILWAY BILL.—A numerous meeting of about 80 gentlemen, chiefly chairmen and directors of the well-established lines, took place at the King's Arms, Palace-yard, on Wednesday, to oppose the proposed railway bill introduced into the House of Commons, by Mr. Strutt, the President of the Board of Trade. Mr. Hudson, M.P., was called to the chair; and, after some discussion, it was agreed that the right hon. Member should wait upon the Chancellor of the Exchequer, so as to explain the opinions of the gentlemen present, and their determination, if amicable arrangements were not come to, to modify the bill, to take active steps to insure its defeat. On his return, Mr. Hudson announced, that the Chancellor of the Exchequer intended to let the representatives of the various companies know the result of his examinations of the bill before any further steps were taken on it. It was then resolved, that a committee, consisting of the chairmen and deputy-chairmen, and secretaries of all the companies within 50 miles of London, and all the Members of Parliament who thought fit to attend, should be appointed, with powers to communicate with the Government, and to convene a meeting of the representatives of the various companies, to report the result of their negotiations, prior to the bill being read a second time.

On the London New Stock and Share Exchange there was a good business done this week in railway shares. Northern continues varied from 25s. to 30s.; Newport and Abergavenny were done at 15s.; Reading, Guilford, and Reigate, par to ¼th; East Indian, 8s.; Great Western of Bengal, 7s. to 8s. 6d.; Madras, Nellore, and Arcot, 2s. The other Indian lines are improving, from a report of a general amalgamation of the companies. In the Ceylon, nothing has been done for a considerable time, owing to the shareholders being kept in such ignorance of the proceedings of the directors. The conductors of the Liverpool and Birkenhead Conveyance Company cause great suspicion by their proceedings; the deposits have been paid since the early part of December, and yet the scrip does not make its appearance—out of 50,000 shares, 45,000 are said to have paid the deposit

HULL, THURSDAY.—The market, since our last, has been without animation, and the amount of business slight. Edinburgh and Glasgow, and Newcastle and Berwick, are in request; East Lancashire scrip, too, is more inquired for.

AUSTRIAN CLEMENCY.—The Austrian Government has just decided, that all prisoners condemned to more than five years' imprisonment, shall be henceforward employed in working the quicksilver mines of Idria, and the lead mines of Beiberg—so as to allow as few persons as possible, of good character, to work there, both quicksilver and lead mines being so injurious to health.

In the course of January last there were proved at Liege 35,000 gun-barrels, 5000 double-barrelled guns, and 2000 pairs of pocket pistols. In the course of 1846, the exact number of proofs at Liege was as follows:—125,921 gun-barrels, 35,186 double-barrelled guns, and 102,022 pairs of pocket pistols. These numbers demonstrate the prosperity of this manufacture, which is constantly increasing.

PRICES OF MINING SHARES.

BRITISH MINES.

Shares.	Company.	Paid.	Price.
1000	Abergwessin	6	11
256	Albert Consols	1	4
1024	Alfred Consols	4½	55–60
235	Andrew and Nanglies	28½	15
1000	Barristown	4½	27½
4000	Bedford	2½	4
128	Besore Lead Mine	14	10
320	Birch Tor Tin Mine	21½	14½
8000	Blaenavon	50	40
100	Botallack	175	225
120	Brewer	5	7
10000	British Iron, New, regis.	10	17½
—	Ditto ditto, scrip	10	19
128	Budnick Consols	52½	45
128	Burthy	20	21
100	Bwich Cwmerân	20	—
128	Callestock	17	40
1000	Callington	24	25
256	Caradon Consols	47	5
256	Caradon Copper Mine	9½	1
256	Caradon Mines	15	15
256	Caradon United	24	15
256	Caradon Wh. Hooper	12	5
1000	Carn Brea	15	90
2048	Carmarthen Consols	2	5
112	Charlestown	200	175
166	Cleveland	9	2½
1900	Combmartin	7½	4½
1000	Comblawn	¼	2
128	Comfort	45	85
5000	Con. Tretoil Mining Ass.	5	¼
256	Condurrow	20	25–6
2560	Cook's Kitchen	2½	4
1000	Copper Bottom	1	5
1024	Cosheen	4½	30
240	Craddock Moor	15½	15
128	Creeg Braws	120	200
500	Cubert Mine	12	27
7100	Derwent	8½	5
1024	Devon&CourtenayCon.	5	3
1000	Dhurode	2	5
186	Dolcoath	30	65
10000	Durham County Coal	45	9
256	East Alvenney	3	10
112	East Caradon	40	40
2048	East Crowndale	4½	2½
512	East Combe Silver-Lead	6½	20
128	East Pool	5	14
100	East Relistian	15	20
9000	East Tamar Consols	1½	2½
—	East Wheal Albert	1	3
94	East Wheal Crofty	280	310
—	East Wheal Fortune	—	—
256	East Wheal Kitty	1	1
128	East Wheal Rose	50	1200
128	East Wheal Seton	14	20
512	Fowey Consols	40	45
10000	Galvanised Iron Co.	10	9½
10000	Gen. Mining Co. for Irel.	¼	¼
1000	Godolphin	25	35
256	Gonamena	21	50
128	Goonvrea	4	5
128	Great	20	200
244	Grambler & St. Aubyn	—	35
100	Great Consols	1000	400
256	Great Callestock Moors	22	95
2560	Great Michell Consols	1½	4½
256	Great Resugga Moor	2	4
512	Gt. Wh. Rough Tor Con.	2	25
1500	Great South Tolgus	2	3
100	Grogwinion	5	—
1000	Gunnis Lake	1½	3
256	Gwinear Consols	5	10½–15
1000	Hanson	14	3
1000	Harrowbarrow Old Mine	6½	3
1000	Harrowbarrow Consols	2	¾
800	Hawkmoor	3	2
6000	Heigneton Down Con.	4	2½
256	Herodsfoot	14	15
10000	Hibernian	12½	1
—	Hobb's Hill	4	3
1000	Holmbush	18	14
256	Ivy Tor	1½	2½
827	Kirkcudbrightshire	4½	5½
2048	Lamherooe Wh. Maria	9	4½–5
128	Lanarth & Penstruthal	190	100
2048	Lanivet Consols	4	2
200	Larkholes	1	3
160	Levant	—	90
1000	Lewis	15	10
1280	Llancynfelin	6	10
256	Lostwithiel Consols	7	7
128	Loudcott	3	5
4000	Marke Valley	10	3½
5000	Mendip Hills	2	2½
10000	Mining Co. of Ireland	7	6½
256	New East Crowndale	3½	3½
128	North Fowey Consols	20	23
100	North Pool	85	150
70	North Roskear	10½	340
256	North Treburget	4	5
100	North United	41	20
256	North Wh. Abraham	½	20
262	North Wh. Leisure	1½	3½
128	North Wh. Providence	2½	7
256	North Wheal Rose	25½	18
15000	Northern Coal Co.	23	2
1200	Old Delabole Slate Co.	25	50
128	Par Consols	900	1000
1024	Pembroke	1½	6
256	Penhallow Moor	15	4
4000	Pennant	1	3
100	Penrhiw	30	65
128	Pen-y-Cefn Mine	50	55
1280	Perran St. George Un.	13	20
128	Perran Wh. Virgin	9½	84
512	Plymouth Wh. Yeoland	2½	5½–6
2048	Prince Edward	1½	1¼
112	Providence Mines	35	45
256	Redruth Consols	3	10
10000	Rhymney Iron	50	30
256	Ross Consols	10	11½
1000	Rosewall Hill	1	5
—	Shotts Iron Company	55	70
2500	Silver Valley	4	3½–4
256	Sourton Consols	3½	4
128	South Caradon	10	400–10
2000	South Dolcoath	2	—
256	Sth. Friendsh. Wh. Ann	14	14
200	South Harvannah	23	26
9000	South Tamar	½	¼
256	South Tolgus	2½	15

BRITISH MINES—*continued.*

Shares.	Company.	Paid.	Price.
900	South Towan	10	1½
256	South Trelawney	15½	15
128	South Yeoland	16½	20
136	South Wheal Basset	110	110
134	South Wh. Francis	160	200–6
256	South Wh. Hope	—	5
1000	South Wh. Maria	2½	2
256	South Wheal Rose	11½	1
10000	Southern&Western, Irish	2	4–5
256	St. Austell Consols	8	16
94	St. Ives Consols	—	320
128	St. Michael Penkivel	5	7
1000	Stray Park	43	25
9609	Tamar Consols	3	5½
1024	Tavy Consols	3½	2½
6000	Tincroft	7	10
256	Ting Tang	15	20
128	Tokenbury	140	17½
256	Trehane	2	20
5000	Treleigh Consols	6	3
256	Trenow Consols	30	40
98	Tresavean	10	200
120	Trethellan	5	35
120	Treviskey and Barrier	130	150
256	Trewollack	20	25
128	Trewellard	12	26½
6000	United Hills	5	¼
100	United Mines	200	500
10240	Victoria Tin	1	1
256	Wellington Mines	15	30
128	West Basset	45	15
256	West Caradon	20	160
128	West Cargoll	2	12
512	West Fowey Consols	40	35
256	West Grambler	7	8
—	West Kekewich Consols	—	3
256	West Providence	9½	30
200	West Seton	40	46
120	West Trethellan	5	25
256	West United Hills	2½	6
256	West Wh. Friendship	7½	4
3645	West Wheal Jewel	11	2½
2560	West Wh. Maria	1½	3½
256	West Wheal Shepherd.	5	2
256	West Wheal Tolgus	21½	6
256	West Wheal Treasury	14½	8
240	Westerlake	3	3
5300	Wicklow Copper	5	15½
134	Wheal Adams	41	30
1000	Wheal Agar	—	—
256	Wheal Albert	10	8
128	Wheal Acland	13	2
256	Wheal Allen	1½	4
237	Wheal Anderton	16½	45
128	Wheal Ann	—	50½
128	Wheal Arvbae	2	3
2568	Wheal Barbara	1½	1½
256	Wheal Benny	6½	5½–6–7
256	Wheal Blencowe	8	10
256	Wheal Bucketts	20	30–35
256	Wheal Byon Consols	½	½
136	Wheal Clifford	190	190
1024	Wheal Concord	6½	4
128	Wheal Courtenay	—	90
6000	Wheal Curtis	1½	2
256	Wheal Dyke	12	13
512	Wheal Elizabeth	2½	3
256	Wheal Fortescue	8½	10½
2048	Wheal Frederick	2	2
384	Wheal Franco	25	25
256	Wheal Gill	19½	18
1024	Wheal Grace	2	2½
128	Wheal Harriet	45	50
2048	Wheal Holwell	1½	1½
256	Wheal Jane	11	30
256	Wheal Kekewich	4	4
256	Wheal Louisa	6½	10–12
112	Wheal Margaret	—	15
256	Wheal Maria (Hayle)	19	35
1024	Wheal Maria	1	500
4000	Wheal Martha Consols	5	—
256	Wheal Mary Ann	5	60
1024	Wheal Mary (Calstock)	3	1
256	Wheal Mary Consols	34	25
256	Wheal Mary (Lanivet)	6½	7
256	Wheal Mary Pentuan	2	6
256	Wheal Maude	1½	1½
128	Wheal Metha	23	95
128	Wheal Pollard	12½	12
210	Wheal Prospect	4	13
128	Wheal Reeth	1	17
128	Wheal Rose	60	50
64	Wheal Seton	150	800
1024	Wheal Spearne	1½	6
256	Wheal Sisters	27½	22½
128	Wheal St. Ann	9	15
256	Wheal Trelawney	7½	115
256	Wheal Tremayne	35	45
128	Wheal Trew	20	21
256	Wheal Trevenna	3	4
92	Wheal Tryphena	140	150
128	Wheal Venland	12½	10
127	Wheal Virgin	60	60
256	Wheal Vlow (Perranz.)	½	¼
1024	Wheal Walter	4	2
256	Wheal Williams	2	18

FOREIGN MINES.

Shares.	Company.	Paid.	Price.
5000	Alten Mining Company	1½	4½
15000	Asturian Mining Co.	9	8
20000	Australian	2	9–12–10½
10000	Anglo-Mexican Co.	100	1
13574	Ditto Subscription	25	2½
600	Barossa Range	4	50
3000	Bolanos	150	—
2000	Ditto Scrip	15	6½
12000	Brazilian Imperial	20	2½
10000	Cobre Copper Co.	40	25–24½
15500	Colombian Co. regis.	55	4½
6000	Ditto Scrip	—	
5000	Coplapo Mining Co.	14	2½
10000	General Mining Ass'n.	20	15½
20051	Mexican Company	59	—
4000	Mocaubas & Cocaes	25	4½–5
29320	{Rl. del Monte, regis.	28½	av. 3½
	{Ditto unregistered		
	Ditto Red Debentures	—	19
	Ditto Black ditto	—	17
	Ditto Loan Notes	150	110
7000	Royal Santiago	10	5
2000	Pachuca Mines	4	4½
11000	St. John del Rey	15	8½
63174	United Mexican	28½	2½

NEW ZEALAND.—North British Australasian (Kaw-saw) ..... £100, 000 .. 1 .. 1½

*** *We should feel greatly obliged by agents, or others interested, furnishing us with such corrections for our Share List as we may not have received through our usual channels of information—our object being, to present as accurate a list of prices as can be obtained—to procure which, we solicit the aid of correspondents in general.*

LATEST CURRENT PRICES OF METALS.

LONDON, MARCH 5, 1847.

		£	s.	£	s.	d.
IRON	Bar *a*..Wales	ton	0	0—	9	0
	,, ..London	,,	0	0—10	0	0
	Nail rods	,,	0	0—10	10	0
	Hoop(Staf.)	,,	0	0—12	0	0
	Sheet	,, ,,	0	0—13	0	0
	Bars	,,	11	0—11	10	0
	Welsh cold-blast foundry pig	,,	5	5—	5	10	0
	Scotch pig *b*, Clyde	,,	3	14—	3	15	0
	Rails, average	,,	9	10—	9	15	0
	Russian, CCND *c*	,,	0	0—	——		
	,, PSI	,,	0	0—	——		
	,, Gourieff	,,	0	0—	——		
	,, Archangel	,,	0	0—13	10	0
	Swedish *d*, on the spot	,,	0	0—11	15	0
	,, Steel, fagt.	,,	0	0—17	0	0
	,, ,, kegse	,,	15	0—15	5	0
COPPER	Tile *f*	,,	0	0—92	0	0
	Tough cake	,,	0	0—93	0	0
	Best selected	,,	0	0—96	0	0

		£	s.	£	s.	d.
COPPER	Ordin. sheets, *h*	,,	0	0—	0	10½
	,, bottoms	,,	0	0—	0	11
YELLOW METAL SHEATHING		,,	0	0—	0	0 8½
TIN	Com. blocks *g*	cwt.	3	0—	4	18	0
	,, bars	,,	0	0—	4	19	6
	Refined	,,	0	0—	5	1	0
	Straits *k*	,,	4	17—	4	18	0
	Banca	,,	5	0—	5	1	0
TIN-PLATES	Ch., IC *i*, box		1	2—	1	11	0
	,, IX	,,	1	15—	1	17	0
	Coke, IC	,,	0	0—	1	7	0
	,, IX	,,	0	0—	1	13	0
LEAD	Sheet *l*	ton	19	5—19	10	0
	Pig, refined	,,	0	5—21	0	0
	,, common	,,	0	0—18	15	0
	,, Spanish, in bd.	,,	17	10—18	0	0
SPELTER	(Cake) on spot	,,	21	10—21	15	0
	,, for arrival	,,	20	5—20	10	0
ZINC	(Sheet) ex export.*	,,	0	0— 28	0	0
QUICKSILVER		*lb.*	0	0— 0	4	6

MONTHLY REPORTS.

IRON.—Welsh and Staffordshire remain, both as to prices and demand, in much the same position as on the 1st ult. In Scotch pig a fair amount of business was done in the past month at about 73s. 6d. to 74s. early cash, for mixed Nos. About 1s. higher was paid last week, and 77s. for all No. 1 of select brands. There was a demand last week for Swedish, and about 450 tons were purchased. The stock is now unusually low. A fair business has also been done lately in Swedish steel.

COPPER.—The expected advance took place on the 9th ult.—viz. ¼d. per lb. on manufactured and 4*l.* 10s. per ton on unmanufactured. There is a great demand at present rates, and the manufacturers are very full of orders. Yellow metal sheathing advanced ¼d. per lb. at same time.

TIN.—The demand for English continues very fair, and stocks remain low. In foreign, very little doing. The stock on hand is 87 tons.

TIN-PLATES have been very little in request for the past two months. The stocks on hand, however, are light, and prices firmly maintained.

LEAD is in fair demand for home consumption. There is no American here, and only about 10 tons of soft Spanish.

SPELTER, which was so buoyant on the 1st ult., has gradually given way. A few hundred tons were sold in Feb. at 21*l.* for May and June shipment, and at 21*l.* 5s. for shipment in March; this last is now 21*l.*, but for more distant periods it can be bought at 20*l.* 5s. to 20*l.* 10s. The total stock in warehouses is 1850 tons, of which about one-half is held for consumption, &c.

[From a Correspondent.]

IRON.—During last month scarcely any change took place, either in Welsh or Staffordshire. In Scotch pig, several sales have been made, at prices varying from 72s. 6d. to 74s. for mixed Nos., and for No. 1. At Garthsherrie, a few parcels exchanged hands at 76s. to 76s. 6d.; within the last few days, the prices have declined about 1s. 6d. per ton, but there is very little pressing on the market.

COPPER, as was anticipated, has advanced ¼d. per lb. on manufactured, and on tile and cake 4*l.* 10s. per ton, and a fair business has been done during the month at advanced prices, the demand being more for the home trade than for exportation.

ENGLISH TIN continues in good demand, at present quotations. Banca and Straits have been dull of sale, but prices remain firm.

TIN-PLATES.—The demand last month has been again rather limited, and prices if anything lower.

LEAD.—English pig has undergone scarcely any alteration since last month—a fair amount of business is doing, chiefly for home use. No stock of Spanish or American here at present.

SPELTER.—Since last month, this article has declined about 10s. on the spot, and nearly 15s. for spring shipment. In the early part of the month, a few hundred tons were taken for May shipment, at 21*l.*; but within the last few days, sellers for delivery at a more distant period, have appeared at 20*l.* 15s. The present stock is now reduced to 1850 tons.

GLASGOW PIG-IRON TRADE, MARCH 4.—We have had but a limited demand for pig-iron for the last week, and prices have in consequence slightly receded. Our quotations are 73s. to 73s. 6d. for mixed Nos., cash, in 10 to 14 days, delivered free on board.

BOMBAY, FEB. 1.—Metals have been in fair demand, but without much alteration in value. The following sales are reported—or known to have taken place:—500 cwts. tile copper, at 50½ rs. per cwt.; 150 cwts. of brazier's sheets, 4 by 4, at 61 rs. per cwt.; 90 cwts. of heavy sheets, 4 by 3, at 60 rs. per cwt.; 400 cwts. of sheathing, at 58½ rs. per cwt.; 40 cwts. of bolt, at 59 rs. In iron, we are informed of a sale of 70 candies, 3-16 at 6-16 inches, nail-rod, at 46 rs. per candy; of 165 kegs nails, at 12 rs. per cwt.; of 776 bundles sheet-iron, at 7½ rs. per cwt.; of 9510 bars false Swedish, at 38 rs. per candy. In spelter we have heard of a considerable transaction, at 10 rs. 10 ans. per cwt., since last mail. There has been a sale of quicksilver since our last, and the market is bare of that article.

CALCUTTA, JAN. 21.—There has been a fair inquiry for copper—stocks being now much reduced—and prices very firm: we estimate the present stocks to be—sheathing and brazier's, 3000 mds.; tile, 4500 mds. There is a considerable quantity of slab at market—10,000 to 11,000 mds.—but, from the general inferiority of its quality, at present is little wanted. In spelter sales of 2100 mds. have been made at 9-4 to 9-6 Co.'s rs. per md., and the present value is 9-8 Co.'s rs. per f. md.: the stock is large, not less than 55,000 mds. being held by importers. In iron there is little change to report in its value. In steel there has been no improvement in prices—a sale of 1600 tubs having been made at 6-4 ct. rs. 6-4 per f. md. In lead prices are unchanged, no transactions having come to our notice: there is very little sheet at present in the market. In quicksilver some rather large sales have been made, at ct. rs. 8-7 per f. seer.

WHEAL ST. ANN, DREWSTEIGNTON, DEVON.—WANTED immediately, a second-hand HORSE WHIM and PUMPS for the above mine. Address to Capt. PENROSE, Sticklepath, Devon; or to 104, Thomas-street, Bristol.—March 4, 1847. 56

COPPER ORES.

Sampled Feb. 17, and sold at Serpell's Hotel, Pool, March 4, 1847.

Mines.	*Tons.*	*Price.*
North Roskear	104	£4 9 0
ditto	102	7 0 6
ditto	98	6 17 0
ditto	97	6 1 6
ditto	93	7 0 0
ditto	91	5 5 6
ditto	87	5 5 6
ditto	86	7 4 0
ditto	72	8 10 6
ditto	67	7 5 6
ditto	51	4 12 6
ditto	50	10 12 0
Consolidated	107	7 6 6
ditto	89	9 10 6
ditto	87	4 15 0
ditto	84	8 5 0
ditto	83	6 4 0
ditto	81	7 15 0
ditto	80	4 19 0
ditto	71	6 6 0
ditto	59	5 2 6
ditto	29	5 6 6
Tincroft	73	3 19 6
ditto	64	8 5 0
ditto	60	3 13 6
ditto	46	5 13 0
ditto	41	3 4 6
ditto	37	4 19 6
ditto	34	4 13 6
Tincroft	28	£2 12 6
ditto	20	3 0 0
Fowey Consols	93	4 3 0
ditto	76	5 9 0
ditto	75	5 12 0
ditto	62	2 17 6
Wh. Seton	110	6 19 6
ditto	77	5 8 6
ditto	65	4 19 6
Creeg Braws	98	3 14 6
ditto	78	3 19 6
ditto	30	5 1 0
ditto	20	2 19 0
ditto	19	4 7 6
South Wh. Francis	57	18 4 0
ditto	38	4 1 0
ditto	36	18 5 0
Wh. Harriet	58	4 1 6
ditto	57	5 8 0
South Roskear	56	5 1 0
ditto	52	6 7 6
Lanivet Consols	67	6 7 6
ditto	23	3 7 0
Hayle Slag	80	1 4 6
ditto	2	4 9 6
Tretoll	52	5 19 6
West Fowey Con.	44	5 15 0
Wh. Buller	12	3 8 6
ditto	6	5 4 6

TOTAL PRODUCE.

North Roskear	998	£6630	3	6		
Consolidated	770	5180	4	0		
Tincroft	403	1906	9	6		
Fowey Consols	306	1398	8	0		
Wh. Seton	252	1508	7	0		
Creeg Braws	245	968	14	6		
South Wh. Francis	131	1848	6	0		
Wh.

NOTICES TO CORRESPONDENTS.

The MINING JOURNAL is published at about Eleven o'clock on Saturday morning, at the office, 26, Fleet-street, and can be obtained, before Twelve, of all the news agents, at the Royal Exchange, and other parts of London.

RAILWAY IMPROVEMENTS.—The cuts, illustrating Mr. Coles's paper, in our last Journal, were transposed—the Ground-Plan should have been in the place of the Perspective—but the error was so evident to the reader, as scarcely to require allusion.

We received a letter from Windsor on Wednesday, but it was unfortunately mislaid—we should feel obliged by the writer again communicating with us.

THE MINI[illegible]NAL

And Atmo[illegible]

[illegible] LONDON, MARCH 6, 1847.

We have, in [illegible] remarked on the proceedings of a company, professedly carried on under the Cost-book System, and can only express our regret such should have taken place; while we are free to admit that, unless the Cost-book System be well understood, and strictly adhered to, the risk incurred by adventurers in mines, is such as they by no means entertain, nor can they well conceive. The proceedings in the Court of Exchequer in the cause VIVIAN *v.* MOWATT, is one too important to lose sight of; while our limits will not admit this week of entering into the several points at issue. It is, however, we think, pretty conclusive, that mines worked on the Cost-book System, must necessarily be subjected to the Stannary Court, and under its immediate supervision, which, in our opinion, applies only to Cornwall. We may be wrong, although the late registrar of the Joint-Stock Company's Registration Act, in reply to an application made to him, stated that such applied to mines in Wales, Scotland, or any other part of her Majesty's dominions; we doubted then, and we doubt it at the present moment: the case of VIVIAN *v.* MOWATT, at once shows that the Stannary laws do not apply to the out-adventurer; while the courts in London, or out of the county of Cornwall, cannot recognise the Cost-book System. In Cornwall, the cost-book is evidence—out of the county it cannot be received. The question is one of importance, and we wish that adventurers would look into it.

In another column will be found a report of the meeting of the adventurers in the LAMBROOK WHEAL MARIA MINE, at which the question of the Cost-book System was not only raised, but, we must say, got rid of by a "side wind"—an arrangement being made with the purser (who appeared by his representative), to contend that the mine has not been carried on under the regulations which are generally observed, as applying to those worked on the Cost-book System. We believe no doubt can exist, but that companies managed in London, and who profess to act upon the Cost-book System, have sadly travelled out of the beaten track; and, while they have observed in one point the rules which pertain thereto, have forgotten *that*, while they may be considered to come under the laws which apply to the Joint Stock Companies' Registration Act, 7 and 8 VIC., c. 110, there is also a question of partnership, which, we believe, none of the adventurers contemplated in embarking in the undertaking. We do not, for a moment, wish to raise a question as regards the company, which we believe to be conducted on principles of the strictest honour and integrity; but it is only right we should well consider the position in which they have placed themselves, not only with a view to their remedying the errors into which they have fallen, but, at the same time, that other parties may take a lesson, and avoid them for the future. It is clear, that the Cost-book System has not been adhered to *(if even it applies to Devonshire)*, inasmuch that calls have been made, meetings convened, and such without being formally called by the purser. Without entering on the question, as to the powers vested in a committee, or the purser, which we reserve for another occasion, we think it must be quite apparent that the purser is either in office, and, as such, required to perform certain duties which devolve on him, or his office is a nullity. Such, indeed, appears to have been admitted by the chairman and the meeting, they having determined on calling a special general meeting of the adventurers on an early day, such to be summoned by the purser, whose power by such resolution is at once acknowledged. What the registrar, under the Joint-Stock Companies' Registration Act, will say to this, we, of course, can offer no opinion; but we can only regret, that his attention should be directed to a subject, which so intimately interferes with the mining interests.

SILVER-LEAD ORE.—Two valuable parcels of silver-lead ore have been discharged this week in the River Thames. The vessel has been in the port of London for about three weeks, but the ore could not be removed till a parcel of oats had been first unloaded, the ore being at the bottom (of course) of the vessel. It appears, that a vessel containing corn, is entitled to demand a certain number of market days allowed ere the captain can be compelled to clear his vessel. The oats were *from*, and not *for*, Ireland; and the *ore* was the produce of the Royal Mining Company's mines, and consigned to Mullins, Brothers, and Co., smelters, London.

MINING IN SOUTH AUSTRALIA.—The *Adelaide Observer*, in a lengthy Article on the Labour Market, says—"Although we have an abundance of copper and iron in our hills, the colonists have not yet attempted to supply their own wants with the pig, or malleable iron, which might be produced here in great abundance, and of a quality not to be surpassed. Sheet and pig-lead the colony will soon cease to import; and may supply, for exportation, to a considerable extent, as soon as labour, applicable to this species of mineral productions, is more plentiful." Miners employed at day work, do not consider themselves sufficiently paid at 30s. per week—many are requiring 40s. to 42s. In consequence of the increased demands of miners in some localities, proprietors and explorers have felt themselves compelled to resist what they consider palpable encroachments, and prefer suspending operations for a time. At tutwork, tribute, or ton-work, the earnings of miners have been very considerable. Quarrymen labour under great temptation to turn miners—but they may earn, in their own employment, 21s. to 25s. per week.

COAL IN WESTERN AUSTRALIA.—We are this month prepared to lay before our readers the result of the examination we promised to have made, of the samples of *quasi* coal found in the Murray district, Western Australia, as reported in the "supplement extraordinary" to our journal of November last. We had originally placed the investigation in the hands of Dr. Scoffern; but in consequence of the illness of that gentleman, it was transferred to Mr. William Stott, one of the most experienced practical coal workers in the country, who is constantly engaged in making researches among the coal fields, and tests of their produce. The following is the report sent in to us by this gentleman:—"I have tried part of the specimen you sent me from Western Australia, and find part to be a kind of shale, and the rest partaking of the qualities of coal. I have also submitted it to several practical and experienced workers of mines, amongst whom there is a difference of opinion respecting it. That the specimen is such as we frequently meet with in the hilly parts of this country where coal is found, is admitted by some of them as well as by myself; but before I could venture to give an opinion in favour of boring, I would suggest that the brooks be sought through—and that the sides of them, where rocks and shaley metals are bare, be examined; and, if on such examination, no small particles of coal or slack be met with, there appears little chance of coal being found. It would also be advisable to look the brooks carefully through after high floods have taken place, as they oftentimes bring coals to light, or something from which it is not difficult to ascertain that coal is very probably lying there. Should anything of this kind be observed, then, by digging several holes a short depth, proof might be had whether they really existed or not. Without these guides, in an unproved country, it would not, I think, be good policy to go to the expense of boring."—William Stott, Kearsley, Bolton-le-Moors, Lancashire.—*Swan River News.*

PROGRESS OF FRENCH MINING INDUSTRY.

[FROM OUR PARIS CORRESPONDENT.]

The St. Germain Railway Company is now causing to be covered in its immense station at Paris. Till now, passengers arriving, and departing, were exposed to all the severity of the weather, which was very disagreeable; and, besides, the carriages and locomotives sustained damage from being always exposed to the open air. This station serves as the head of the Rouen and Versailles Railways, as well as of the St. Germain, and will shortly have to serve for the Havre line also. The vast structure now in course of erection is exclusively of iron, and appears to unite solidity with lightness and elegance. The covering of the roof will be in zinc. The great station of the Northern Railway, at Paris, is also in iron; and it seems certain that all the *debarcadères* of the railways that may hereafter run into the capital, will be in iron too. Iron, no doubt, is the best thing that could be employed for such a purpose; and notwithstanding its excessive dearness, will certainly turn out in the long run to be cheaper than any other material. The vast iron *debarcadères* of the Northern and St. Germain Railways, deserve to rank among the curiosities of Paris. They cast the long straggling one in *wood* of the Orleans line completely into the shade.

From an official return, lately published, it appears that the *Conseil des Prud' hommes* for metals, decided, in the course of last year, 2034 affairs —1962 of these were arranged by conciliation, without delay and without expense; 72 judgments only had to be given—the greater part of which were by default, and many of them were subsequently arranged. Upon the whole, of the disputes that occurred last year between persons engaged in the different branches of the metal trade at Paris, 97 per cent. were arranged by conciliation, and without expense. This fact speaks volumes in favour of the institution.

The shareholders of the Coal Mines of Terre-Noire have determined to dissolve the company, and to sell their concessions, stock, &c. This measure is taken as a preparatory step to the formal amalgamation of the Terre-Noire coal-pits with those already absorbed by the great United Companies. The Terre-Noire pits are among the most important in the basin of the Loire; and their being swallowed up by the amalgamated companies, shows that the latter will have sooner or later *all* the coal mines of the Loire Departments under their control. The Terre-Noire concern consists of 2000 shares, of 2000*l.* each. No doubt the shareholders, in amalgamating with the great *Compagnie Generale*, have acted wisely for their own interests; but their proceeding will add to the alarm the public feels at the monopoly with which they are menaced.

The shareholders in the mines, forges, and foundries of Aubin, are convoked in a general meeting at Paris for 27th inst.

The Marine Department notifies, that on 20th March, it will receive contracts at Lorient for 20,074 kilogrammes of zinc. Large contracts for different articles are also to be received at Rochefort. Complaints continue to be made of the wretched manner in which the dockyards are supplied, or rather are not supplied, with the most necessary articles. Some few days ago, a Government steamer could not quit a port, because there was not sheet-iron to repair an accident to its chimney!—another was obliged to wait for a long time for a few tons of coal.

Most of the great iron establishments are devoting considerable sums to the purchase of flour and corn, which they sell to their workmen at less than the market price. The companies of Hayange, Blanzy, the furnaces of the Loire and Ardeche, are particularly quoted for their charity. Messrs. Talabot have adopted another system in their iron-works—they induce their men to eat a good deal of meat, instead of subsisting entirely, or principally, upon mere vegetable diet as heretofore; and Messrs. Talabot hope, that after a few months meat-eating, their workmen will be as stout, strong, and laborious as those of England. It is ungracious to cast a reflection upon what seem charitable actions—but is it not the sudden affection which the ironmasters just now manifest towards their workmen, adopted as a nice little piece of clap-trap for the Chambers, when the iron monopoly shall be attacked?

The chief mining engineer in Algiers employed by the Government, has lately thrown up his situation, and has been replaced. The cause of his resignation is not stated—but, whatever it may be, it is an indication that he has no great faith in all the marvellous tales that have been told of the mineral wealth of the French colony.

One of the favourite topics in the declamation of the ironmasters, and their partisans, against any modification of the iniquitous protection they enjoy, is, that it would have the effect of driving 400,000 workmen out employ. Now, the fact is, that the persons engaged in the fabrication of iron in this country do not exceed, even if they come up to 49,000. Supposing that the abolition of all protection would entirely ruin the iron trade, so small a number of individuals could easily find other kinds of employment. But there cannot be a more mistaken notion on earth, than to imagine that the doing away with an excessive and unjust protection would cause the ruin of the iron trade in this country. The great difficulty against which the ironmasters have to contend is scarcity of fuel, and dearness of conveyance. Of ore they have as much as they can require—more, indeed, than they can work. Give them, then, cheap coal, with cheap and rapid means of conveying their products to all parts of the country, and they have nothing to dread from foreign competition—so far from it, some well informed people even declare, that with such advantages, foreign competition would have reason to dread them. Here is a proof of what French ironmasters can do with cheap fuel:—In the north-western group of iron mines, as it is called, iron ore is far from being so good, or so plentiful, as in the rest of France. Up to 1834-36, the production of iron in this group was very insignificant, owing to the heavy duties that existed on foreign coal; it was only 208,037 metrical quintals of cast-iron, and 83,967 metrical quintles of forged-iron. But almost immediately after the duties were lowered, the production increased to 291,061 metrical quintals of cast, and 137,768 metrical quintals of forged-iron. Observe that the duties on coal were not abolished, but only reduced, the reduction still leaving them excessively high; and yet a mere reduction caused that great increase in the fabrication of iron in the most unfavoured district of all France. What would have been the consequences, had the duties on coal been abolished altogether? And what would be the consequence of a total abolition—not on the production of the worst iron district of France —but on that of the entire kingdom?

"*St. Dizier, Feb.* 25.—*Fers laminés*, at 380 fr. and 390 fr.; *fers battus à la houille*, for Paris, 385 fr.; for the provinces, 390 fr.; *essieux bruts*, 390 fr. to 395 fr.; *essieux etampés*, 410 fr. to 415 fr.; *bandages pieces*, 420 fr. to 425 fr.; *fils de fer*, 6½ fr."—*Paris, Wednesday.*

BRUSSELS, *March* 2.—The *Moniteur* publishes an account of the exportations made in the month of February last, and compares them with those of the same month in 1846 and 1845. The exportations of metals and coal serve to give some idea of the state of mining industry, and, therefore, I quote them:—

	Jan. 1847.	Jan. 1846.	Jan. 1845.
Coal ..... *tons*	39,720	89,522	69,598
Iron (*fontes en gueuse et fonte epurée*) *kil.*	3,175,492	4,326,460	3,158,425
Rails	—	4,184,667	6,117,635
Cast-iron, *ouvrée*	7540	6769	42,256
Iron, *battu*	58,345	33,704	34,354
Nails	251,073	273,586	458,312
Zinc, *brut*	100,500	166,204	322,500
Do. *laminé*	60,437	50,462	46,608
Machines and machanical pieces	39,009	44,548	69,867
Detached pieces of machinery	51,962	15,477	—
Portative arms ..... *fr.*	210,355	184,392	137,073

Among the importations made into Belgium in January last, were 30 tons of coal; in January, 1846, the quantity was 300 tons; and in the same month of 1845, 446 tons.

On the 27th, a terrible explosion of gas took place in the coal-pit of Gérard Close, at Vottern, near Liege, just as the miners had descended to relieve those who work by night. The first accounts of the accident represented that a great number of persons had been killed; but it appears that they were only seriously wounded.

The directors of the Zinc and Lead Company of Mornbach call a general meeting of the shareholders at Brussels, on the 31st inst.

Last week's market report of Antwerp, represents that little was done in metals; and says, that no transactions whatever took place in copper, from there being no arrivals, except 657 lingots, and 217 parcels from London, by the *Princess Victoria* steamer.

GUN COTTON AS A PROPELLER OF MACHINERY.—Isaac Mickle, Esq., of Camden (New Jersey), is applying gun cotton to the propulsion of machinery in his factory. The engine is constructed on the plan of the ordinary steam engine, only there are two cylinders, one working in the other. The gun cotton is ignited by electricity, engendered and applied in a novel manner. Any degree of power may be obtained. It is safer than the ordinary steam-engine, and one person can run it.

SILVER AND GOLD MINES OF THE NEW WORLD.—No. VI.

IV. THE GOLD MINES.

Thus far we have only spoken of the working of silver mines, without occupying ourselves with gold, though gold would seem to claim the first place. But gold frequently presents itself as an accidental, or accessory, product of the silver mines. Gold mines, properly so called, possess much less interest. By the relative smallness of the value that they ordinarily yield, as well as by the natural circumstances peculiar to them, and the treatment to which they are subjected, they form a portion less curious and less interesting of human industry. Most of the gold mines that are worked, or known, are not in rocks. They are not veins, or beds, that are pursued perseveringly into the entrails of the earth, by making profound excavations, demanding prodigies of mechanical science, and from whence metal is drawn by extraordinary skill. Gold is not there in a state of complex association with other metals, or with some of those non-metallic substances that are with difficulty disengaged from metals, such as sulphur, chlorine; or with demi-metals, such as arsenic and antimony. Almost always gold is in the native state—that is to say, of free metal, allied, nevertheless, in a proportion, more or less feeble, to another noble metal—silver; and the places from which it is drawn are beds of superficial sand, or nearly so—alluvions deposited by the waters. Nature has shown itself at once prodigal and avaricious of this metal—prodigal in the sense, that she has very frequently made it appear in the veins with which she has injected the crust of the globe, and even in the rocky masses that occupy a part of the continents; but excessively avaricious in this sense, that it is distributed in such rare portions that in most of the deposits in which it is placed, it would require such heavy expenses to obtain, that industry would be obliged to abandon it. By a subsequent operation, however, Nature charged herself to concentrate the infinitely little that she had dispersed in veins, and in rocks. When the envelope of the globe was rearranged by the waters, which put themselves in motion in powerful masses, in order to round off the flanks of chains, and soften the asperities of the surface, an immense quantity of rocks was triturated. Thence arose the lands of alluvion, which occupy so vast a space on the surface of the globe, and the presence of which was necessary to enable the earth to be put in culture, for the nourishment of the human family which arrived later. From all these matters, separated, perhaps, by terrestrial commotions, and reduced into sand by the waters, the action of the currents at the same period separated, to unite them in distinct beds, the metallic particules heavier than the rest, and particularly the grains of gold.* It is thus that, in the midst of the alluvions placed at the feet of mountains that contained auriferous veins, we find beds in which particles of gold are become more numerous, or less rare, than in the original deposits, and where, in consequence, the toil of man may seek them with advantage. Most of the mines of gold thus reduce themselves to deposits of auriferous sand, in which, concentrated as relatively it is, the gold is still not at all abundant; but Nature having very frequently disposed of some grains of gold, when from the bosom of the earth she threw igneous matters to the surface, the number of sandy mines in which gold is found is very considerable. If we were to count the deposits of alluvions, from which gold is obtained with greater or less success, we should be surprised at the length of the list. It would be seen that there is not a country, not a province of any extent, that has not its mines of gold. We should never have done, if we counted all the watercourses which possess gold, and in which some gold seekers have gained, and may still gain, a miserable subsistence. In all countries, the auriferous deposits present themselves near one another on unlimited surfaces. It is the pure truth, that the possible mines of gold are at least as numerous as the mines of iron. The contents only are different. The average wealth of a mine of iron may be fixed by approximation 10 or 15 per 100 † at least; that of mines of gold is 20,000 or 40,000 times less.

There is, however, every reason to believe that there exists, in some localities, a considerable quantity of pieces of gold, bigger than those which form the wealth of the alluvions that are worked.‡ It is the opinion of more than one man of erudition, and more than one geologist. It is thus that may be explained the presence of a considerable quantity of gold among people little advanced in the arts of civilization. The Gauls, when they were conquered by Julius Cæsar, possessed relatively a good deal of gold. The much greater treasures accumulated by the sovereigns of Perse, were due principally to those princes, counting human labour for little, causing the sands to be washed by numerous troops of slaves.

In the mountains, at the feet of which the alluvions produce gold, men have not always succeeded in discovering the precious metal, on account of its being so disseminated. On several points, however, of the New Continent, in Mexico, near Oaxaca, in a great number of localities of New Granada, in Chili, and in the United States, on a long line, situated at the foot of the chain of the Alleghanies, there exists mines of gold in which are attached, not only the alluvion sands, but the solid mass of rock, which is worked by shafts and galleries. The same is the case on a certain number of points on the Old Continent.

The working of the auriferous sands, which represent $\frac{1}{10}$ths of the deposits of gold that are turned to account, is only, no matter to what extent it be carried, a small branch of industry, divided even when a hundred establishments acknowledge the same master, and using elementary means compared to those which the art of mining and metallurgy have caused to be generally employed. It offers to the observer the interest of a great difficulty conquered, of a great power displayed, and a surmounting of obstacles. It is a branch of industry even more uncertain than that of silver mines. Each deposit, considered isolatedly, is very confined, and, by consequence, the yield of gold mines cannot have the regularity of a vein, which generally extends itself to an almost undefined length. There is always reason to fear that the auriferous alluvions which appear the best will soon turn out poor. The unreasonable attraction that this metal exercises over people in haste to possess, and impatient to become wealthy, counts for something in the perseverance with which the working of it is continued. And yet the same lands, sometimes the same beds, are layers of platina, are layers of diamonds. Reunited, all these riches would appear to form an inexhaustible source of fortune; but they only afford to the industry of man, an insignificant domain.

The greater part of the gold that Mexico supplies is drawn from silver, with which it is confounded. The operation by which gold is separated from silver, which is called the *parting* (*apartado*), has in all time been practised in Mexico. Among the Mexican nobility, which drew its wealth from mines, and made it willingly derive its titles from Castile, there was a Marquis de *Apartado*—it is the title of the Fagoagas. First is procured a portion of auriferous silver, that which contains the most gold, with which is mixed, when necessary, mercury with the ore that is ground in the *arrastras*. The mercury possesses itself of the native gold which is sometimes disseminated in the mass, or of the gold which may be combined with native silver, which is most frequently seen, in dissolving the silver. It is, besides, a plan to isolate immediately the silver itself from the substance in which it is enveloped; and, when the silver is rather abundant, the plan is a good one. The ores, that are rich enough to be treated by the fusion process, yield silver more auriferous than that which is obtained by amalgamation. The operation of parting (*le depart*) has been carried to a high degree of perfection in Europe. The refiners of Paris, who are, it is true, of unequalled ability, gain in making the parting, when the lingots of silver contain the third of $\frac{1}{1000}$th of gold. In Mexico, under the colonial system, the Government charged itself with this task, but accounted to the miners for no gold, unless it amounted to 6½ 1000ths. As much as 45,000 kilogrammes of silver were thus treated every year. At present, a quantity at least equal is treated, although the production of silver be less; but the process of parting has been greatly perfectionised in Mexico.

The proportion of gold contained in silver, which is always feeble, varies considerably in different mines, and exercises a great influence on the profits of the miner. One kilogramme of gold represents pretty nearly 16 kilogrammes of silver. The mines of Tasco, of Catorce, and the greater part of the veins of Zacatecas, are scarcely auriferous. The veins of Guanaxuato, and those of Guadalupe-y-Calvo, contain a remarkable proportion of gold. The auriferous lingots are those in which smuggling is carried on in preference to others. For this reason, official documents and registers of the parting establishments do not make known the ordinary contents of gold in the most favoured mines. M. Duport, who had good means of knowing, says that, in 1841, the proportion of gold for the districts nearest

* The same circumstance occurred with respect to platina, and, from the same cause, its extreme weight.

† I should say 30 to 40 per cent., if I did not speak of ores once washed, or of those not washed at all.

‡ These *pépites*, as they are called, are found in the midst of auriferous sands. The largest of all the *pépites* that are known, was that of 36 kilogrammes (79 lbs.), discovered not very long ago near Misak, in the south of the Ourat Mountains. That which the Spaniards found at Hayti, and which has always been celebrated, although it was immediately lost in a shipwreck, weighed 14½ kilos. (30 lbs.)

to Mexico, which are only moderately rich, were 6000ths of the weight of silver subjected to parting; but it is known, by the accounts of some companies, that the auriferous silver, obtained by placing mercury in the *arrastras*, contains up to 4 and 6 per 100 of its weight in gold. Four or five years ago, in the Mine Rayas, one of the establishments of Guanaxuato, the silver, considered in a manufacturing point of view as auriferous, represented in weight 13 per 100 of the total mass of lingots, and in value the gold formed the eleventh part of the revenue of the mine (89,131 piastres in 977,153). In the mines of Guadalupe-y-Calvo it is greater. In the first quarter of 1842, the proportion of gold was found to be 10 times greater than in the mine of Rayas. It was on the total mass of ore 2500ths of silver, and $\frac{1}{10000}$ths of gold. In the second quarter the gold was less abundant; the proportion of silver being about the same; that of gold diminished in the ratio of 10 to 4. Taking altogether, M. Duport calculates that at present Mexican metallurgy, in taking account of the washing of auriferous sands, and even of gold mines, properly so called, furnishes in gold a value to the eighth of that of silver, 2,600,000 piastres against 16, and in weight 1 against 130.

The deposits of alluvion gold of the department of Sonora are the most renowned of Mexico. The mines of Oaxaca, that have been worked since the conquest, and must be worked again, are mines in rock. So are those of Villalpando, near Guanaxuato. Among the causes which restrain in Mexico and Peru the working of gold mines, must be mentioned the facility of theft. That is one of the motives which have contributed, as much as the default in the continuity of the veins, to cause to be abandoned many gold mines in rocks. Labourers in silver mines often pilfer rich pieces of ore, and, to prevent these thefts, they are frequently subjected even to ignominious examinations. It is a struggle of cunning between the workman, who desires to appropriate to himself some valuable pieces, and the overseer, who tries to make him give up what he may have stolen. With gold the temptation is much greater, and the theft much easier. The working by washing offers the advantage to require only simple instruments, and almost no capital. It is, therefore, labour that the workmen can undertake on their own account. We may consequently believe, that the alluvions of La Senora will become very productive, as soon as the population shall go there to reside.

[*To be continued in next week's Mining Journal.*]

JOINT-STOCK AND PRIVATE BANKS OF THE METROPOLIS.

The system of banking in the metropolis has arrived at such enormous magnitude, that any remarks or information thereon becomes of the utmost importance, not only to the capitalist but to society at large, and a pamphlet which we have before us, from the pen of Mr. James Knight, formerly of the bank of Messrs. Barclay and Co., and the Union Bank of London, will be read with much interest: it is published by Effingham Wilson, Royal Exchange, entitled a *Review of the Private and Joint-Stock Banks in the Metropolis, with Remarks upon the Constitution of a new Chartered Joint-Stock Bank, under the Provisions of the 7th and 8th Vic., c. 113, &c.*: and in the *Mining Journal* of the 20th ult. we gave one entire chapter from it, being a description of the five joint-stock banking companies in London, their capital, assets, liabilities, &c. The author next proceeds to describe each more minutely, gives a complete outline of the operations of the clearing-house, and then proceeds to the consideration of the several points which would be embraced by a joint-stock company formed under this Act—first, as to the charter; this he considers the most important preliminary step, and the mainspring of success, for confidence is imperatively necessary in banking business, and a charter would give that confidence; the amount of shares being 100*l.* is by no means too large; and, as to the amount of capital, he shows that it is a point which involves serious consideration, and that, without detracting from the merits of the present joint-stock banks, a chartered company would appear before the public under such superior and tested influence, as to place it at the head of the joint-stock banks, and second only to the Bank of England. The author next comes to the subject of directors. To a public company the character and standing of the directors are of the first importance; they should be selected according to their influence, knowledge, resources, and general qualifications; and it is by him presumed that a joint-stock bank in London should have from 12 to 18 directors. The several points of lending spare capital, allowance of interest on balances, the nature of deposit accounts, commission accounts, letters of credit, purchase of stock, &c., are all carefully investigated, and the author concludes, with some observations on the reserve fund, the dividend, estimate of balance-sheet, and the best description of surety to be required from the several officers. Upon all these points the author evinces an intimate knowledge of the principles of "banking," and appears to us to have omitted nothing which could convey a full and correct idea of those principles. We have no doubt the work will be appreciated by those well versed in monetary affairs, and will prove a useful and instructive study for the junior clerks in the banking business of the metropolis.

North British Australasian Company.—It may not be generally known that this company possesses some very valuable copper mines in New Zealand. We briefly alluded to this subject on a former occasion—but, for the benefit of our readers who may not have noticed our remarks, we shall now recapitulate a few of the principal facts. This company was established in Aberdeen a few years ago, for the purpose of investing its capital in land, and other property, in the colonies of Australasia. Among other investments, they purchased the Island of Kawaw, near Auckland, for the purpose of pasturing sheep and cattle. About two years ago, the manager of the company's affairs in the colony, discovered vast quantities of copper ore on this island, and which is said to be covered with that valuable mineral. The island is from six to seven miles in length, and from one to four miles in breadth; has a good harbour and safe anchorage ground, and water sufficient to float a vessel of any size. The directors succeeded in securing the services of an experienced mining captain, who arrived at Kawaw at the beginning of last year. His reports have been extremely favourable. The result of his assays has been, the highest 50 per cent., and the average 20 to 25 per cent. Some regular miners have been set to work upon a very rich lode of ore, and are taking out at the rate of 10 to 12 tons a day. Since the first discovery of the copper, about 500 tons have been received, realising upwards of 5000*l.*—but none of this was selected by a miner, being sent off before the mining captain had arrived. The average price, however, which has been received, is about 12*l.* per ton; while the expenses have not been more than 6*l.*, owing to the trifling freight paid for bringing it home. It has come as ballast; and, in some cases, was as low as 12*s.* 6*d.* per ton. There is no doubt but that a higher freight may now be demanded, but the richness of the ore will more than counterbalance that. The manager, in some of his last letters, has advised the shipment of several hundred tons—some of which, we believe, has just arrived; and we are informed, on good authority, that the mines at Kawaw are expected to net 60,000*l.* this year. For the sake of the shareholders, we hope this will be the case—for it will pay them very handsomely, the capital of the company being only 100,000*l.*—but there are other sources from which they may expect to derive a considerable revenue. This company, in conjunction with another, have lately purchased a very valuable grant of mineral land adjoining the celebrated Burra Burra Mines. Upon this property very rich lodes of copper ore have been discovered, and its value appears to be pretty well known—for we believe they were offered 2000*l.* premium upon their purchase the day after they had concluded the bargain. When these mines come into full operation, we consider they will be fully equal to the Kawaw. We may also state, the North British Australasian Company possesses about 15,000 acres of land in Australia, upon which they have got 30,000 sheep, 2000 head of cattle, &c. They received last season a large quantity of wool, which they disposed of at very remunerative prices. The direction of the company is composed of gentlemen of high standing and respectability, and we have every confidence in their management. The shares are at present at a small premium, but we understand that many of the large shareholders consider, that by holding them, they will make their fortune. We would not advise them to be too sanguine; still, from all that we know of the prospects of the undertaking, we are disposed to think it will prove a valuable investment. In the page which contains our share list, will be seen the quotation of the shares on the 23rd of Feb., which we take from the share list of Messrs. J. Black and Co., Aberdeen. We may state, in conclusion, that the capital is all paid up, in 1*l.* shares.

A deputation from the South Lancashire coal proprietors, consisting of the Hon. Colonel Lindsay, M.P., Mr. Fletcher, Mr. Darlington, and Mr. Watkins (solicitor), had an interview with the Right Hon. Edward Strutt, on Monday last, at the office of the Commissioners of Railways, in Great George-street.

Original Correspondence.

REMARKS ON HYPOTHESES ON IRON.

Sir,—Your correspondent, "Ferreus," in his communication of last week, states, that he considers it sheer fancy to suppose that clay, lime, and *other substances*, give up their oxygen to carbon in the puddling-furnace—that is to say, when they are in contact at the same time with carbon and atmospheric air. It is most probable that clay, lime, and some other very difficultly-reducible oxides, do not give up their oxygen under such circumstances, but the more readily-reducible oxides most certainly do. I will take, as an example, the oxide of lead (litharge). This oxide is fused with charcoal in a reverberatory furnace (in which, of course, there is always an excess of atmospheric air), and is reduced to metallic lead; which, notwithstanding its great affinity for oxygen at a read heat, does not combine with that substance, but runs off, and is collected in the metallic state. Oxide of iron, and other oxides, which are readily reduced by carbon, doubtless behave in the same manner; the reason I take to be this:—In proportion as the carbon present takes oxygen from the oxide, so does a layer of carbonic oxide surround every particle of substance in the furnace; and the atmospheric oxygen, which is always entering, instead of attacking the metal itself, attacks its envelope of carbonic oxide, forming carbonic acid; whilst a fresh layer of carbonic oxide is being formed. This process can be supposed to go on until the whole of the carbonaceous matter necessary to reduce the oxide is oxidised—then, if there be any excess, carbonic oxide, and, finally, carbonic acid, will be formed at the expense of the oxygen of the atmosphere; and then, and not before, will the reduced metal be acted upon and reoxidised.

Again, "Ferreus" objects to the supposition, that grey cast-iron is a mechanical mixture of carbon with white iron—at the same time, mentioning two methods by which he thinks this could be at once disproved. That this is not a mere conjecture, has been abundantly proved by Karsten, who has pointed out, by a strictly analytical method (and not a rough mechanical separation, as recommended for trial by "Ferreus"), for ascertaining the quantity of mechanically-mixed carbon (which is in the state of graphite), and the quantity of carbon combined with the iron, forming a carburet of that metal. For the satisfaction of "Ferreus," and for the information of your readers generally, I will, as briefly as possible, give Karsten's method; also, giving some of his analysis, which will answer the question in the communication I have alluded to, as to the amounts of phosphorus and sulphur detected in cast-iron.

I may add, that I hope, in a few months, to be enabled to lay before the scientific world, analyses of the various kinds of iron—not only with reference to their amount of carbon, but also to the amount of all their various constituents, as manganese, silicon, phosphorus, &c. The method of Karsten is as follows:—A weighed amount of the metal to be examined is dissolved in nitric acid, to which a small amount of hydrochloric acid is added. The insoluble residue contains chrystalline carbon (graphite), and an extractiform compound of carbon (derived from the carbon of the carburet of iron), as well as silicic acid (silica), and some oxides, whose metals were combined with the iron. On this residue is poured a solution of pure potash, which dissolves the extractiform compound as well as silicic acid, but does not attack the graphite, which latter substance is to be treated with a little hydrochloric acid, well washed with water, dried, and weighed. The whole quantity of carbon, in a like sample of metal, is now to be determined by mixture with fused chromate of lead, and chlorate of potash, subsequently heating the mixture in a tube of difficultly-fusible glass, and collecting the carbonic acid evolved in a potash apparatus, as used for organic analysis. From the increased weight of the apparatus, the amount of carbonic acid is ascertained, and from that the amount of carbon. If the weight of the graphite be now deducted from the whole amount of carbon obtained in the last process, the amount of combined carbon will be found. This process is absolutely accurate when conducted with ordinary precaution.

The following analyses clearly prove that grey cast-iron does contain uncombined carbon, and that white cast-iron does not:—

Analysis of Grey Iron.—Iron, 86·739; manganese, 7·420; silicon, 1·310; graphite, 2·370; combined carbon, 2·080; sulphur, ·001; phosphorus, ·080 = 100·000.

Analysis of White Iron.—Iron, 89·738; manganese, 4·490; silicon, ·550; graphite, ·000; combined carbon, 5·140; sulphur, ·002; phosphorus, ·080; = 100·000.—John Mitchell: 23, *Hawley-road, Kentish Town, March* 2.

HYPOTHESES ON IRON.

Sir,—In reply to the candid "Ferreus," who confesses that himself and others, or, as he remarks, "*We*, are quite in the dark on the causes of different quality in bar-iron," I shall, in the first place, observe, that the mechanical mixture of carbon with iron, forming grey cast-iron, is much manifest, by the fact of this carbon remaining unaltered in an acid solution in which grey cast-iron has been dissolved—whilst the chemically-combined carbon is variously acted upon, according to the nature of the acid solution, and is sometimes wholly dissipated, as with nitric acid. Next, as chemical elements unite in definite proportions of limited number, if carbon be not mechanically united in grey cast-iron, it would appear, from analysis, that in grey cast-iron, the carbon is united in limited and definite proportions with the iron; but this is not found to be the case, for grey cast-iron may contain any integral or fractional proportion of carbon, from zero upwards, until it passes into the state of the purest graphite—thereby indicating beyond a doubt that the combination of the carbon is mechanical, not chemical. In white cast-iron, on the other hand, the carbon is chemically combined; and, from a series of experiments made upon that kind of iron, I find that 225·28 parts of metallic iron unite with 6·12 parts of nearly pure carbon, to form white cast-iron; and allowing for the inaccuracy of my analyses, and the impurity of the carbon, this indicates that the composition of white cast-iron consists of one equivalent of carbon, and eight equivalents of iron, and, consequently, that white cast-iron contains about 2·74 per cent. of carbon.

I have not asserted that earths are ever metallised by exposure to carbon *in contact with the air*, either in a blast-furnace, or in a puddling-furnace, as "Ferreus" would imply. In a puddling-furnace the charge lies upon the sole of the furnace bottom, beneath the current or draft of the furnace; and as the charge is worked, carbonic oxide is generated, filling the sole or bottom of the furnace to the exclusion of the superincumbent and lighter air; and it is just in this stage of the process that the addition of an auxiliary oxide becomes most beneficial—and this, simply because each portion of the charge is surrounded by an atmosphere of carbonic oxide, instead of atmospheric air. Lime does not, in the puddling-furnace, tend to decarbonate the iron; but, on the other hand, it has a strong tendency to deoxidate the puddling-furnace cinder; for lime, in mixture with peroxide of iron, will, by exposure to cementation, convert that peroxide into protoxide. With *random speculations* and *conjectural fabrications*, I have nothing to do; I possess the recorded facts, and realised results, of 50 years' application, to the subject of iron making, by my father, Mr. D. Mushet; and for 15 years I have myself studied the subject with deep attention. I come now to the latter portion of the captious letter of your correspondent—"Ferreus." I have never found it possible to complete the deoxidation of an oxide of iron without an *intense* heat—the last portions of oxygen being very firmly retained by the iron; it, therefore, requires an *intense heat* to deoxidise the cinder, or oxidised scales, under the hammer, when brought in contact with the carbon yet remaining in the puddle balls of iron. As regards the heat generated by friction amongst the particles of iron when under a hammer, had "Ferreus" ever witnessed the tilting of steel, he would have avoided an exposure of his very great ignorance upon this subject. In spite of the incredulity of this learned critic, "bars of steel actually grow hotter under the hammer," from the intense friction of the particles, *inter sese*. Let "Ferreus" take a piece of cold tough iron wire, and bend it rapidly backwards and forwards, he will find that, even in this cold piece of iron, an almost *intangible* degree of heat has been generated at the vertex of carvature in the wire. How much greater must that degree of heat be which is generated by the gigantic blow of a hammer of 3 tons weight upon a mass of iron already in a state of intense incandescence? The object of sprinkling silica upon bar-iron, about to undergo the process of welding, is to promote the formation of a liquid and silicated glass of iron, so as to prevent the deflagration of the particles of iron by exposure to the atmospheric air. Pure quartz, and oxide of iron, produce the most fusible and liquid of glasses; and this fusibility determines the blacksmith to use quartz sand in preference to clay, or other earthy matters; but, for the expense, borax is best suited for expediting the process, and insuring the success of welding. Arsenic exists as an alloy with iron; sulphur exists in cast-iron in quantities so small as only to afford a trace of its existence by chemical tests; phosphorus has been found in various proportions, but seldom exceeding one per cent. upon the weight of the cast-iron. Red shortness and cold shortness in bar-iron, arises chiefly from inattention to the use of proper fluxes in producing pig-iron from the blast-furnace; the same, or similar ores, will produce from the same furnace, and with the same fuel, red-short or cold-short iron, by varying the nature of the fluxes used; so can a cook make a light or a heavy pudding by varying the ingredients.—R. Mushet: *Coleford, March* 1.

CARBO-OXIDE.

Sir,—I am obliged to Mr. Mitchell, for pointing out the absurd mistake I have committed in my letter of the 8th of February; and I can only apologise for the error by stating, that my time is so fully occupied in close and unremitting attention to business, that what I have written has never been recopied or revised, which, in the present instance, has led to the publication of a most erroneous statement. The passage alluded to by Mr. Mitchell should have stood thus:—"When oxides are thus introduced, during the process of puddling, carbonic oxide is formed, passing rapidly into carbonic acid, by union with the oxygen of the air furnace; and, if oxides be added in mixture with carbon, this chemical action is facilitated; the carbon, chemically combined with the iron, uniting with the oxygen of the auxiliary oxide, to form carbonic oxide; whilst the carbon, mechanically combined with that auxiliary oxide, further unites with the oxygen of the latter, forming more carbonic oxide, and metallizing the auxiliary oxide itself.—Robert Mushet: *Coleford, March* 1.

EXISTENCE OF ORGANIC REMAINS IN GRANITE.

Sir,—I am sorry to have disturbed the equanimity of Dr. Murray, by having announced the existence of organic remains in granite, and that assuredly not a reconsolidated granite; yet, in the vicinity of L'Ancresse Bay, in the Island of Guernsey, such remains are to be found. As to the earth's axis of rotation, there is every geological evidence in favour of a change having occurred in its direction; and were the columns of your Journal suited to the dry (and, to most readers, uninteresting) details of physical science, I could readily bring forward evidence, founded upon the strictest principles of the Newtonian philosophy, to show that a change of direction in the earth's axis is by no means inconsistent with the conclusion of Sir Isaac Newton—of which conclusions I do not need to be reminded, but merely observe, that a few of his conclusions have been proved to be slightly erroneous; but that, when this has been the case, it has arisen solely from his opinions having been based upon the inaccurate observations of his predecessors and contemporaries. With the geological evidence of the present age, Newton would, in all probability, have advocated, and by his genius confirmed, the idea of a change of direction in the earth's axis. If the facts, respecting organic remains found in trap and granite, have disturbed the chain of Dr. Murray's evidence, by shaking one of its links, I cannot help this; and Dr. Murray needed not have *twice* observed, that he should not again notice remarks upon this subject. Robert Mushet.

Coleford, March 1.

WATER IN THE BLAST-FURNACE.

Sir,—I am extremely desirous to collect instances of water blown into a blast-furnace through hot-air stoves, the amount blown in, and the effects of it on the operations of the furnace. I have a furnace fitted with two hot-air stoves of 20 pipes each—the internal area of the A pipes, 27 in. The air enters the stoves from a water regulator through 12-in. pipes, and the horizontal pipes of the stove are about 3 ft. above the top of the air chest. The blast is divided to the tuyeres through three 6-in. pipes—the two side pipes in a part of their circuit touch the ground, and are sometimes sprinkled with water from the tue-irons and breasts. When the perilous derangement took place, which I have recorded as an instance of the effects of an improper raw coal, the parties who had during months inflicted a series of unparalleled disasters, differed with me in opinion, and attributed that disorder to the effects of *water blown into the furnace*. I had a person of great experience who sided with me, and all persons who saw the coal go in performed a ratiocination; but, on the opposite part, an individual of greater experience asserted, to persons devoid of science, that this disorder, and months of difficulty, had arisen from *water in the furnace*. For my part, I could not agree to the doctrine. Those who have done great mischief, will, in moments of trepidation, deceive themselves with an excuse; and a series of improper acts had, on this occasion, been so ruinous, that there was every reason to disguise truth's unpleasant countenance; but as there was no hurry, but a steady perseverance of assertion, matters wore an aspect of prescience more than of surprise. The moment the danger threatened, masons were at hand to dig deep drains round the furnace under the blast-pipes. A small portion of the burden, which was as usual in this furnace excessive, and of unusual quality, was taken off. This made a trivial amendment towards the close of the week, at which time the new drains were also completed round the building; but the change being no way answerable to the doctrine of the water cure, the furnace continuing very sickly through the next week, so that it became necessary to remove all the raw coal, so great was the zeal of these hydropathists, that, like the child who put the clock forward that he might see the sunset, they deducted one-fourth part of the make from the first week, and added it to the second, falsifying the produce book, that it might appear to testify to the instantaneous anhydropical remedy. These figures affording encouragement, a deeper drain was brought up 100 yards at great expense, to complete the argument, as yet with no surprising result. I should like the opinion of your acute correspondents as to the amount of water which could be blown into a furnace through 40 hot-air pipes constructed as described; in what state it might pass their repeated volutions, without being converted into steam, or producing any explosive effect; and in what way a stream of water, adequate to a fortnight's mischief, can pass into pipes, either hot or cold, against the adverse pressure of the blast. It has appeared to me that, if water did ascend an inclined plane during the rest at casting, this eccentric quantity would be expelled in the state of steam in two strokes of the engine, provided it did not rend the joints in passing. It appeared, likewise, hard to conceive how a sufficient quantity could lodge so high in an intense white heat as to set the boshes into slips, and prevent eight hours the descent of the materials. And why, again, should it have so great an agency *only* at the time raw coal was used? Will it dissipate the enigma to suppose, an elective affinity betwixt raw coal and water; and that, by some mysterious current, the water rose up in the furnace to meet the coal? We are in an age of progress and novel ideas, which antiquated minds with difficulty believe, and this rigid incredulity in our manager was heavily visited; still, however, both he and myself feel always open to information—a little of which we have already received.—D. Mushet, Jun., *Gloucester, March* 1.

RAISING WATER BY ATMOSPHERIC PRESSURE.

Sir,—Mr. Bennetts is not, perhaps, aware that his principle of lifts opening to the atmosphere was more than two years back patented by Mr. Emslie, C.E., in a very economical form. About a year and a half since, I proposed sinking a deep mine pit where much water was anticipated,—and, with the object of economy in rods, &c., &c., directed my attention to atmospheric pressure in successive lifts. I devised a machine with pipes and water receivers; and, as I wished to secure the construction to a highly-ingenious mechanic and iron founder in my employ, commenced a correspondence with Mr. John Farey, with the view to a patent. The pit not having been sunk, and other affairs absorbing my attention, these steps were not prosecuted; but, at leisure intervals, I corrected and simplified the machine, when I unexpectedly discovered that it had, with my *latest* improvements, been long patented by Mr. Emslie. The first thought was a series of valves, self-acting in each vessel by floats; but as the simultaneous consent of each alternate pipe is absolutely necessary for effect, I altered the arrangement to a connecting rod for all the valves as Mr. Bennetts proposes. The difference betwixt this gentleman and Mr. Emslie is such, that I conclude theirs are like mine—*independent formations*. It is improbable, from their priority in the field, that I shall derive any benefit from my own labours; but this is a point always secondary to the advancement of science or *truth* in any shape—I, therefore, rejoice in the opportunity to offer an opinion from the attention I have bestowed on it, that the principle is capable of effecting great economy in pumping from deep mines; and I shall be happy to hear of an engine prepared and at work on the system.—David Mushet, Jun.: *Gloucester, March* 2.

CYLINDRICAL CARRIAGES.

Sir,—Allow me to propose the adoption of cylindrical cases of iron around the rectangular bodies of railway carriages, in a section of each door to an arc of a circle, but not solid. The whole [illegible] cased with wood, and stuffed in the usual way; the cross-trees to be [illegible]lar, so as to lower the centre of gravity.—A. T. J. Martin: *Pen[illegible] March* 1.

BRUNTON'S ORE-DRESSING MACHINE.

Sir,—In the *Mining Journal* of last week, there are various testimonials published of Brunton's ore-dressing frames—but none of them state what is the saving effected by this new method of dressing; and, as the machines have now been tested for several months in some of the tin mines, I shall be glad if the parties who have used them will let us know, through the medium of your Journal, what is the saving per cent. of tin and labour, over the old method of framing? The expense of extracting tin ores from the slimes has long been felt a burden; and any improvement that can be made to lessen the expense, and to save the tin better, will be very beneficial to the mining interest.—B. C.: *Penzance, March* 3.

VENTILATION OF MINES.

Sir,—The plan of ventilation, now brought forward by Mr. Gibbons, has long been practised; and, as far back as 1760, Edward Mansell, a native of Dean Forest, made use of a similar method of ventilation. The remains of chimneys and fire-places on the rise workings, in this neighbourhood, are very numerous, and many are in full operation. Mr. Deakin, whose ability in underground workings and ventilation is sneered at only by fireside miners, confirms the antiquity of the method of ventilation in question; and I cannot but admire the good sense of his remarks upon this subject, as well as upon the *true* uses of safety lamps, which, as he has remarked, are, or ought to be, used by the viewer only, to ascertain where in the coal mine the collier may safely work by open candle-light.

The plan adopted by Mr. Gibbons is a good one, and has thoroughly ventilated his colliery, as it has done in many other instances, and, amongst others, in the case of a colliery belonging to my father, where, for 30 years, an air chimney, with its aperture philosophically sealed, has kept up a complete and perfect ventilation. There exists no difficulty to practical men, such as Messrs. Deakin and Cadman, in ventilating their collieries in the most efficient manner, as far as a knowledge of the proper means to be adopted is concerned; but the chief cause of bad ventilation does not usually arise from an ignorance of the mode of effecting a complete ventilation, but generally from the grasping avarice of coal-owners, who will not submit to the expense of adopting an effectual system. Thus, learned men, who have once or twice looked down a shaft, or, perhaps, scrambled through the workings of a mine, and who have examined the various gases at home in their retorts and bottles, fancy they can point out a complete system of extracting these gases from the mine; and forget that the difficulty lies, not in getting the gases out of the mine, but in getting the outlay necessary to effect this out of the coal-owners' pocket. Were there a penalty of 100*l.* inflicted upon every coal-owner for every life lost in his collieries, by gaseous explosions, there would, perhaps, be fewer coal-owners, but there would likewise be fewer human sacrifices offered at the shrine of human avarice. This is the true system, suited to all collieries, to ensure a complete and constant ventilation.—Robert Mushet: *Coleford, March* 1.

MR. GIBBONS'S VIEWS ON VENTILATION—FURTHER ERRORS.

Sir,—Your correspondent, "W.," in the *Mining Journal* of the 13th inst., has conceded the chief proposition of Mr. Gibbons's work—the keystone by which the whole fabric is sustained—it is removed, and it falls to the ground. Mr. Gibbons protests, "*in limine, against all artificial modes, and in this* (he says) *I include fire.*" Thus expressly objecting to the furnace, he proceeds to erect his *upcast chimneys, and his natural ventilation.* If he renounces these, for I conceive "W." to be Mr. Gibbons himself, and admits *artificial ventilation by fire*, his position is forsaken as no longer tenable, and he need not have troubled himself, or the world, with his laboured publication; for ventilation by fire is now, and has been, in existence in mines since 1760, in England. If his elevated chimneys are not, with his top heads, to be the exclusive means of ventilation, they take the place of auxiliaries. For this there is not much objection, provided there is a furnace—but they are a great additional expense, and can equally well be dispensed with. *The furnace placed at the bottom of the upcast*, or in a drift at the same level, there cannot be a shadow of doubt, is infinitely *more effective than the fire at the top of the upcast, or the bottom of its chimney*; better experience than Mr. Gibbons's declares this to be so. It has been tried on the latter principle in the north, and has failed for want of power. Had all the elements in operation been considered, it would never have been tried. The upcast of 140 yards, 420 ft. high, say 7 feet diameter, having its column of air of those dimensions rarefied, and rendered specifically lighter, must contain a column of greater levity than a chimney of 200 feet high, contracted at its mouth to 4 or 5 feet diameter; and will give, consequently, a much greater preponderance to the downcast column, at the temperature and weight of the atmosphere—say, in the whole height of the upcast column, a difference of 100°. In this case the advantage in favour of the furnace at the bottom of the upcast, taking the contraction of the chimney, and the great areas of the mine passages, and galleries, into account, will be nearly as three to one.

To enable an erection and fire over the upcast, to compensate for the furnace at the bottom of the upcast, the erection must be of as great a height, and as great a diameter, as the upcast itself. For instance, over Monkwearmouth pit, the chimney must be upwards of 1800 feet high, and 14 feet diameter, even at its mouth; and then, were such a thing possible, the mine is no better off than when the erection was begun, but rather worse; for the upcast pit, and its furnace, would have better produced a superior ventilation. The furnace in the upcast, or in its furnace drift, gives this additional advantage, that there is no reduction of temperature from external influences—the whole heat of the furnace goes to the rarefaction of the upcast column, and the consequent increase of ventilation. There is no cold external atmospheric air playing around, and in contact with, the upcast, as with the chimney, withdrawing its caloric; the solid rock, forming the walls of the upcast, gets heated to a considerable depth to a high temperature, aiding the ventilation by pouring the whole caloric of the furnace into the column, and would carry it on, for some time, were even the furnace extinguished; while the circumambient cold air, external to the chimney, withdraws the caloric, and reduces the temperature of surface fire and column. Another advantage is, that the lower the atmospheric column, it is the heavier and denser—consequently, by rarefying this lower column, you remove a greater weight, and give a greater preponderance to the downcast, than if you rarefied the higher column in the chimney, leaving the heavier column to counteract, to a certain extent, the force of the downcast. Mr. Gibbons's 300° or 400° in his upcast chimney, when he condescends to use a fire, is quite absurd, and shows much ignorance on this part of his subject. He will scarcely find it possible within 60 feet of his furnace, to excite a difference of 160° to 180° between the temperature of his upcast column, and that of the external air. He must have meant the temperature immediately over his fire; and what can be done over a surface fire, taking the foregoing considerations into account, can be better done over the upcast furnace.

In every point of view *chimney ventilation* is a retrogression; and, as applied to deep and extensive mines, impracticable and ridiculous. Based on airy visions, it will, like them, as speedily dissolve. "W." most absurdly refers to the *mean temperatures* of July and August last year to demonstrate that, by his upcast chimney, without artificial rarefaction, his natural ventilation would have been ample and sufficient. At that mean 62° day and night, the atmosphere being of the same temperature as his mine, Mr. Gibbons's ventilation would be at a stand still—there would, in all these two months, have been no ventilation whatever, had that alone been depended on, *because there would have been no preponderating column connected with his mines*, it is clear. But Mr. Gibbons's mines would not wait to calculate, or operate, in his shafts by mean temperatures—the mines would take the temperatures as they came. For three and four hours a day, then, in those two months, the thermometer and heat of the air in the sun were upwards of 100°. In these hours the ventilation would have reversed itself; for the column of air over the downcast would have been at that temperature 100°; while that in the chimney and upcast would have been only at 62°—the latter rarefied column, the upcast, being at this time the most condensed and the heaviest, would become the preponderating column. From the middle of March last year, to the middle of October, the *mean highest temperature* in the sun, from seven daily observations, was over 70°; in several of the months over 80°; in July and August it was over 90°, according to the tables of the Astronomer Royal—so that Mr. Gibbons *would have had a stand still, or a reversed ventilation, on his natural system, for nearly eight months in the year.* This will never do; if our ventilation and mining operations are to be improved, it must be by something better than Mr. Gibbons's plans and propositions. As for sinking pits for 500*l.* or 600*l.*, it is all very well with him—but in the north, from quicksands, feeders of water, and other impediments to sinking, a single pit will sometimes [illegible] heavy pumping machinery, cost from 30,000*l.* to 50,000*l.*; the Monkwearmouth cost more than 80,000*l.* His suggestion, acted on to its [illegible]tent here, would at once shut up the northern coal field; for no capitalist, with the small chance of remuneration, would embark in so desperate an undertaking; yet I admit, that, in proportion to the vast underground workings in the north, more numerous pits, in many localities, ought to be put down—but even then, without artificial means, on Mr. Gibbons's plans, they would be rendered worse, and more dangerous. There is no necessity to use the upcast for coal drawing; it is frequently not so used here, as at Lord Londonderry's pit, at Pensher, but Mr. Gibbons's contracted chimney is also effecting, to a certain extent, a smaller upcast area and diameter. Not less detrimental is coal-drawing in the downcast, as has been justly observed by your correspondent, Mr. H. Johnson—for the loaded and more impervious skip, corf, or tub, is drawn with great velocity against the descending column, at a rate here sometimes of nearly 10 feet a second, while the current is less than 9 feet: the objection stands, then, more in favour of drawing in the upcast than in the downcast—for it is done with the greatest velocity in aid of the current in the former, the diminished area in both shafts being the same. Mr. Gibbons has not yet explained how he is to rid himself of his heavy carbonic acid gas; he will have to get Dr. Murray to pump it out for him. His system of ventilation, if system or ventilation it can be called, will never do it. That he has had two explosions in his mine last year, I do not wonder; nor will I be surprised to learn, that at certain seasons, they will be perpetually recurring. Absence from home, and pressing engagements, have not allowed me a moment till now to reply to your correspondent: the subject, however, is as permanent and as important as the mines themselves; and, I trust, has not suffered by any delay of mine.—V.: *Newcastle-upon-Tyne, Feb.* 25.

VENTILATION OF MINES—Mr. GIBBONS'S SYSTEM.

Sir,—I perceive, by the *Mining Journal* of Saturday last, we have at length got that "talented surveyor," Moses Taylor, in the field on this subject. First of all he brings forward the mine surveyor of the colliery in question, to prove that I had little practice in the mining department while in his employ; and he (Moses Taylor) being resident bailiff for the same colliery, the men who were so dreadfully burnt, and made their declaration, are still in the employ of Mr. Gibbons. Since he has been pleased to partly withdraw the subject of ventilation, and make a personal attack upon me as regards my *age* (which is fast approaching to 25), *practice*, and *respectability*, I would ask him, at what age maturity is allotted to man, and at what age a man may be allowed to comment, or otherwise, upon a publication touching his professional engagements?—as I presume the correspondents of your valuable Journal will, for the future, be questioned on that point by that conceited person. * * * With respect to my *limited* practice in the mining department during my apprenticeship, if Taylor is ignorant of the cause I will tell him. It was the utter disgust I had towards the deceptive mode practised upon employers, and the utter ignorance displayed by those with whom I became acquainted, that led me to avoid, as much as possible, any connection with it; but, if my career in the mining world has been limited, it has been spent honestly and respectably, with strict application to the particular department which I profess—and am happy to tell Mr. Moses Taylor my efforts have been rewarded by most perfect success; and if such has been produced by my ignorance, it is at least wholly unknown to me. Be it as it may, if he or his co-surveyor of Kingswinford, doubts my capabilities, they have only to signify as much, and I shall be happy to meet either of them at any time. For the future, Mr. Editor, I must refrain from all personal remarks—as I well know it is a subject quite foreign to what your valuable paper is calculated to carry out: therefore, if your correspondent, Moses Taylor, will not conduct his arguments without personalities, I shall at once cease to notice them—and have only stepped thus far from the subject in vindication of my own character.

What a lame tale to tell us, that Mr. Gibbons's system was not formed at the time the explosion took place: Mr. Gibbons observes, at page 26—"I have adopted this principle of ventilating pits by air-chimneys for 25 years." I am quite sure that such were in use at the time of the explosion—but Taylor tells us, it happened in *driving out*; I will venture to tell him, that it will take 25 years longer to devise means to *drive out* under the system, without the possibility of an explosion, and that it will take treble that time to persuade parties to bore and sump up, through a 10-yard coal, every 10 or 15 yards, when it *can* be done without. I presume it would be quite sufficient if the air-head was driven by the side of the gate-road, and slightly elevated at the point where the drainage is required to take place, *provided* Taylor *can* command *such* a current, as the effect of which the hydrogen gas could not possibly withstand—a desideratum, I guess, at present out of the reach of the system. He tells us that the cost of a ventilating stack *ninety feet high, five feet square inside the brickwork at top*, "does not exceed 80*l.* at contract prices, and the present high rate of labour." Would any man with common sense believe this statement, and from a man professing truth or knowledge. Will Moses Taylor, or Mr. D. Mushet, say, that in the event of the downcast being partially closed, so as to reduce the superficial area below that of the channel connecting it with the ventilating stack, that such obstruction, or partial closing, will offer no resistance to the descending current; and that having precisely the same amount of ventilating power exercised in such stack, at that time, as when no obstruction was offered, that the discharge would be equal, and with the same velocity in equal space of time in the one case as in the other;—and if Mrs. A. desires a copious supply of fresh air, she should ask Mr. A. to *open* the door, instead of *shutting* it, as Moses Taylor proposes, as it is evident she will have a better supply when the the door is *open*, than she could get through the key-hole, having the same amount of ventilating power exercised at each time in the chimney.

I am not hardly so ignorant as Moses Taylor may presume, as not to know that no more air can descend the shaft than is discharged, but that *he* will do well to remember that *he* has a greater quantity of air to *discharge* up his ventilating chimney of *four feet area* than he receives down his shaft of 22 ft. area; I would have him never to tell the public that it is a natural ventilator, but to acknowledge like a man that fire *is* requisite, and to apply himself assiduously to the perfect ventilation of the colliery, wherein the system is applied, and never for his life suffer an accumulation of gas, where only "one" shaft is used, with a small channel cut *behind* the brickwork as an upcast—for sure as death, if a powerful explosion does take place, the air channel will be blown to atoms, the stability of the shaft thereby destroyed, and the whole engulphed in one mass, and not a soul beneath remain to tell the dreadful tale. I would, in conclusion, tell Moses Taylor that if I do uphold "Struvé's" principle of ventilation, it is from a sure conviction of its efficacy, and that it is based on one of the most immutable laws of Nature; that it is from humane motives towards the inventive mind, and the condition of the miner, that I do uphold it, not from interested motives, as may be supposed; and am also glad that this opportunity is offered me, of telling him that the model in my office *still* continues to be inspected by nearly the whole of the respectable engineers of this district, also by professional and scientific gentlemen; and what is their observation on leaving the room?—*admiration of its beauty and simplicity*; and not a single objection has been raised by any party whatever, as to the economy or efficiency of the invention.

Dudley, March 2. Henry Johnson.

VENTILATION OF MINES.

Sir,—Mr. Gibbons's plan of ventilating mines has given rise to much discussion. *Query*—Will such discussion be productive of any real good? It appears to me that, with few exceptions, those who have written on the subject have done so more for the purpose of seeing their effusions in print, than from any earnest desire to elicit truth. When a writer, as in the case of "V." (Newcastle), does, in a manner both sound and clear, fairly contend with some of Mr. Gibbons's propositions (and certainly with advantage), he is answered by some "W." (of Dudley), who gives a sneering reply to the questions most easily answered, and to others designs no reply at all. Far be it from me to be so very presumptuous as, for a single moment, to suppose that any observation of so humble an individual as myself could have any effect in causing to subside a little of that rancorous and self-conceited spirit, which some of your correspondents display; but I would merely put it to such, whether they think that any good is to be done by having recourse to such epithets as they occasionally suffer to appear; and I am sure what good sense they have (and many of them have no lack), must answer in the negative.

My object, in troubling you with this communication, is as follows:—A very great deal has been *said* about ventilation of late years, and many schemes have been proposed for its improvement—on those I make no remark. But if your mining readers will, with me, begin at the beginning, and (instead of jumping at a conclusion all at once) grapple manfully with the subject, I have little doubt that, after proceeding "onward" step by step, we shall at last obtain a solid foundation, on which the superstructure of *real improvement* may be reared. It is known, by all who are acquainted with the (present) science of ventilation, that the quantity of air circulating through a mine depends on fixed principles; but the application of these principles to practice, by means of a *practically-correct* formula,* has not, I believe, as yet been accomplished. If your readers will investigate this point by *experiment* very carefully, they will probably ere long furnish "the society of miners" with step No. 1 to improvement in the ventilation of their mines.—Pratique: *Durham, Feb.* 27.

MINE SURVEYING.

Sir,—Hereunder I beg to send the answers to the questions of "A.B., inserted in the *Mining Journal* of last week:—

FIRST QUESTION—OPERATION.

As (60 yds.) 272·7 links : tang. 45° :: 36 links : tang. of its opposite ∠
log. 2·4356851 :: 10·0000000 : 1·5563025
+ 10
= 11·5563025
— 2·4356851
= 9·1206174 = 7° 31 + 7° S.E. = 14° 31′ S.E.

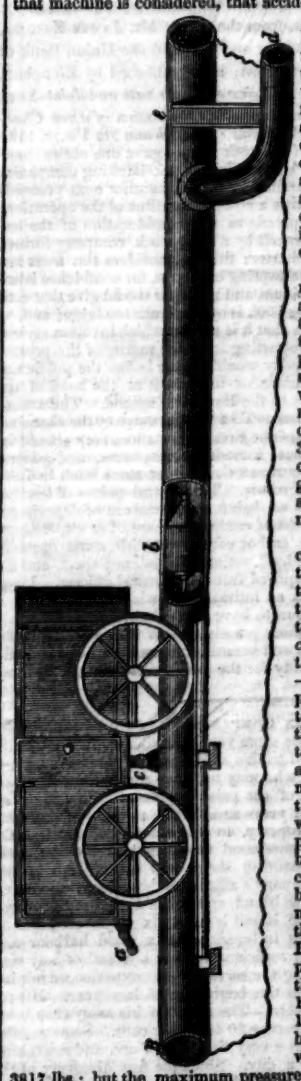
Second Question.—This is an isosceles triangle—given, two equal sides (1760 yds.), and their included angle (1°), to find the other side—the remaining angles are respectively 89° 30′ and 89° 30′.

Then, as sine 89° 30′ : 1760 :: sine 1° to the variation.
log. 9·9999735 : 3·2455127 :: 8·2418553
+ 3·2455127
= 11·4873680
— 9·9999735
= 1·4873945 = 30·72 yards.

Callington, March 4. Walter W. Palmer.

THE ATMOSPHERIC RAILWAY SYSTEM.

Sir,—I have accompanied this letter with an engraving, which shows the principle of atmospheric railways very distinctly. To the scientific reader, I am aware this is not necessary; but we must bear in mind, that others are also concerned in this matter, and the fair sex are as deeply interested in a safe and expeditious mode of public conveyance as we are—perhaps more so, they being more sensitive to danger; the dread of collision, or other accident, and, perhaps, the consequent inconvenience of a wood leg to jog through life on, to them especially must be very appalling. The noise, movement, and general appearance of a locomotive engine, bespeak danger; and it is somewhat surprising, when the nature of that machine is considered, that accidents in using it should be so few as they are. We must not suppose, however, the same vigilance, which now guides it through a large portion of the civilized world, will always protect us; or believe that, by a further extension of its use, railway accidents will be diminished. On the contrary, there is too much reason to expect that they will increase, as swells the river by her tributary streams. This would be a national calamity; and, on that account, I am induced to become an humble advocate for atmospheric propulsion—from its greater safety—and not merely on the score of saving pounds, shillings, and pence; though this point too, before these letters are deeply brought to a close, will be considered: my present impression, however, is, that something like 1,600,000*l.* a year would be saved by working 5000 miles of atmospheric railway, in place of the present system; and that 35,000,000*l.* would be necessary to convert 5000 miles of locomotive engine railway into atmospheric, such lines as the London and Birmingham, or the Great Western.



The drawing only shows the first carriage in the train, which is called the piston carriage. The train is attached to it by the link *a*, and B is the vacuum tube; it is broken to show the piston *b*, which travels within it; *c* is an arm protruding out of the tube, and fixed to the piston carriage—this arm is also connected with the piston *b* by a rod—the piston is on the end of it. It matters little for this description how the tube opens to let out the arm *c*, if it closes again after the carriage has passed, and remains air-tight—we are to suppose that it does so: then, if the air be withdrawn from the tube by an air-pump as at *d*, the atmosphere having been shut off by a valve at *e*, an excess of atmospheric pressure will be behind the piston, caused by the admission of the atmosphere through the opening at the arm *c*, and also at B. Were the tube between *b* and perfectly exhausted, the pressure on the air end of the piston would be 15 lbs. per square inch; and if it were 18 in. diameter, which I consider to be a proper size for a principal railway, the total pressure would be 3817 lbs.: but the maximum pressure in practice would be 4ths of this, which is equal to 24 in. on the mercurial gauge, or 3053 lbs. Allowing 10 lbs. per ton for train traction, there would be a pressure upon the piston sufficient to give motion to a train of 305 tons on a level railway. In addition to 10 lbs. for train traction, allowance must be made for the resistance of the atmosphere when the train is in motion. Mr. Stephenson, in his report (p. 27), states this resistance to be 20 lbs. per ton, when the train has acquired a velocity of 34·7 miles an hour: hence the maximum working capability of an atmospheric railway with a tube, 18 in. diameter, is 101·7 tons, at a velocity of 35 miles an hour.

There is a safety in the atmospheric system which does not exist in any other mode of locomotion with which I am acquainted—that is, the impossibility of one body overtaking another body when in advance of it, when both are travelling in the same direction; also, the impossibility of collision. That this security is afforded to the public by the atmospheric system is beyond all dispute. When the valve *e* (see diagram) is shut, it is quite clear there is no admission to another train into that section of the line where the piston carriage is, unless the piston of that train were forcing its way through the shut valve, which is impossible; and if the valve were open, the tube would be full of air—consequently, there would be no motive power to cause a collision. It is equally clear, one train cannot overtake another train—for the piston *b* must have passed the valve *e*, and the valve be shut again, before a vacuum in the tube can be formed to give the second train motion. Suppose, from some cause or other, the first train does not arrive at its usual time, the circumstance is as well known at the last station the train has left, as it is at the station to which it is going. At the last station the delay is discovered from the tube remaining full of air—consequently, no provision is made for the second train to advance. Railway directors may increase signal posts as they please, and show up red lights or blue—they may extend electric wires throughout the length and breadth of the land—they may make around us a complex web of mental and artificial mechanism, for the safety of life and limb—but I defy them to show us a principle for public safety, by locomotive-engine conveyance, equal to that which is inherent in the atmospheric system.

By locomotive-engine conveyance two sorts of comfort are involved—the one mental, and the other physical. A mental comfort may be said to be involved when the mind is uneasy from the apprehension of danger. I

* The formula, in its present state, requires "*un coefficient numérique que l'expérience doit déterminer, la portion de hauteur motrice détruite par la résistance du tuyau* (air channel from entry of downcast to exit from upcast) *au mouvement de l'air qui le parcourt.*"—*La Traité de Combe de l'Exploitation des Mines*, vol. ii. p. 334.

shall give an example of this kind:—Recently a gentleman had his head literally chopped off on the Great Western line. A friend of mine, who is professionally engaged in the company's service, travelling by it at that time, and fearing news of the accident might reach home before himself, took immediate steps to inform his family that the *beheaded* was a passenger. I have also noticed, on more occasions than one, after a railway accident had happened, and a member of the family, where I might have been, was travelling by that line, those at home were uneasy before the object of their anxiety returned; and well they might, when the public run the risk of having legs, or heads, chopped off on their journey.

A physical comfort may be said to be involved as regards the public in general, who live in the vicinity of railway termini, from the execrable noise which is made by the locomotive engines there collected—some just arrived, and others about to start; and all of them blowing off their highly elastic steam, with a roar which is quite terrific. Is this to be endured in the heart of densely-populated cities? If not, will railway directors tell us, how they mean to keep locomotive engines quiet, when they have converted such central situations, as Fleet-market is, into railway stations? Passengers suffer physically too, from the noise made by the locomotive engine; but, more especially, from the tremor given to the train by the grip which the driving-wheels take of the rails, and the frequently dangerous condition of the rails from that evil, which, with other matter, will be the subject of my next letter. JAMES WHITE, C.E.

Kennington-road, March 2.

ACCIDENTS ON RAILWAYS—HULL AND SELBY.

SIR,—I have read in the *Globe* newspaper of Friday last, an account of the accident which happened the 21st ult., on the Hull and Selby Railway, attended with loss of life. It is there stated, that "the accident was supposed to have been occasioned from the sleepers giving way—but that, as everything possible had been done to remove all trace of the disaster," no positive conclusion could be arrived at, as to the precise cause of the misfortune. These accidents are always involved in much mystery; yet it appears strange that it should be so, if immediate and minute inspection were made. In the present instance, had the sleepers been broken, that would have been at once apparent. Nothing is said of the rails, and 'it is not improbable that the engine was thrown off by a rail being displaced from the chair. Until some more effectual method is adopted, to secure the ends of the rails in the chair, and prevent them starting up at the points, a recurrence of these accidents will take place. From the imperfect joining of the rails, I have frequently noticed the ends drawn asunder from 1 in. to 1½ in. in the joint chairs; and it is evident, when this is the case, the rails must, and will, work loose, and become disengaged, from the weight and velocity of the trains passing along them. The consequence is unavoidable, and what may be expected. A. Z.

Newcastle, March 2.

IRON RAILS v. WOODEN RAILS.

SIR,—I notice in your last impression, a Birmingham correspondent is desirous of knowing, through the medium of your Journal, the result of the application of wooden rails; and you wish some correspondent to furnish you with the necessary information. I think the most ready way of your acquiring it will be to recommend the gentleman to visit the works of Messrs. Thomas Davies and Son, or Messrs. Bagnall and Sons, of West Bromwich, where he has only to see the extraordinary test to which rails are submitted, to be convinced of the utter impracticability of the use of wooden rails; and, I have no doubt, he will communicate the same to you.—W. D. STARLING: *Old Broad-street, London, March 4.*

IMPROVEMENTS IN LOCOMOTIVE ENGINES.

POWER AND SPEED ON THE NARROW GAUGE.

Several experimental trips with the first of a class of narrow gauge engines, the patentee of which proposes by them to secure greater safety and greater speed on the narrow gauge, have been made upon the London and North Western Railway during the last three or four days. The locomotive in question is one of Mr. Crampton's, in whose practical knowledge much reliance has been placed by the narrow gauge party for the production of a locomotive that shall possess both of the excellencies we have mentioned—viz., increased speed and power, and increased safety. The latter, as we shall show, appears to have been secured by the engine, the working of which we are about to notice. With respect to the speed the evidence is not of so positive a character; but it would be exceedingly unfair to draw any inference on this point from the details given below, and for the very plain and simple reasons that are appended thereto.

The engine alluded to is called the *Namur*, and has been made by Mr. Crampton for the Namur and Liege Company. It is a six-wheeled engine, with 7 ft. driving wheels. One of the greatest hindrances which have heretofore presented themselves to the attainment of high speed upon the narrow gauge has been what is called the back pressure in the cylinder. This pressure is in proportion to the diameter of the blast-pipe by which heated air is drawn through the tubes of the boiler, and the number of revolutions made by the driving wheels. To remedy this, Mr. R. Stephenson increased the diameter of the driving wheels of his outside cylinder and long-boiler engines to 6 ft.; then to 6 ft. 6 or 7 in.; and on Tuesday we saw, at Wolverton, a locomotive made by that eminent engineer and manufacturer with driving wheels 7 ft. in diameter. But we may very fairly doubt whether Mr. Stephenson, in thus increasing the diameter of his driving wheels to 7 ft., has not aimed at speed at the expense of safety. Without pretending to accuracy, we may venture to assert, that the 7 ft. driving wheel engine we saw on Tuesday had a height of nearly 9 ft. between the rail and the top of the boiler. Upon a road in perfect order such a height of boiler might not be very objectionable at 60 miles an hour—that is, supposing this class of engine to possess sufficient power to run at that rate with moderately heavy trains; but we think there are few locomotive superintendents who would be perfectly at ease when riding upon such an engine at such a rate over the best laid and most vigilantly-watched narrow gauge line in the kingdom. To obviate this difficulty of back pressure, Mr. Crampton has carried the axle of his driving wheel behind his fire-box; and as he uses outside cylinders, he can increase the diameter of those wheels without raising the height of the centre of gravity. For instance, while Mr. Stephenson's 7 ft. driving wheel engine has the top of the boiler about 8 ft. 9 in. from the rail, Mr. Crampton's engine, with a similar driving wheel, has the top of the boiler about 6 ft. 9 in. only from the rail—that is, the centre of gravity in the one is 2 ft. lower than it is in the other. In this respect Mr. Crampton, we repeat, appears to have succeeded; for his engine, at the greatest speed attained by it on Tuesday, was remarkably steady—as steady as any engine we have ever noticed on the broad gauge. It would seem, therefore, unless it be contended that an engine with the driving wheel behind is less safe than an engine with the driving in the centre, that Mr. Crampton has attained one of his objects—viz., a large driving wheel with perfect steadiness, and a low centre of gravity. Mr. Crampton also seeks to effect as large an available reduction of back pressure as possible, by diminishing the thickness of the layer of coke in his fire-box, and increasing the area of the fire-bars. His theory is, that by thus lessening the thickness of his layer of coke, he is enabled to do with less draught, and can consequently increase the diameter of the blast-pipe to its maximum size.

With these explanatory observations, we shall proceed to notice the working of the *Namur*. The engine was attached to the 12 o'clock train from Euston-square. The train consisted of nine carriages, weighing nearly 50 tons. Between Euston-square and the 11th mile-post the speed was, upon a rising gradient of 1 in 350, 40 miles per hour. Between this station and Boxmoor, the next place at which the train stopped, the axles of the tender became very hot, and the speed of the engine was reduced; the rate, however, reached was 52 miles per hour, on a gradient of 1 in 1056. The train, notwithstanding that the steam had been partly shut off, arrived at Boxmoor 6 min. 30 sec. before its time. Here the axles were found to be still hot, and the driver was instructed not to run the engine at full speed. The speed was consequently below the capacity of the engine; but at her reduced power she made the Leighton station 10 min. 46 sec. before her time—that is, she made this time between Boxmoor and Leighton—because although the train reached the former station 6½ min. too soon, it did not leave the place till the moment marked down for the guidance of the station-master. With axles still hot, the train left Leighton at the correct time, and arrived at Wolverton 8 min. before time, having reached a maximum speed of nearly 57 miles per hour. The steam was blowing off nearly the whole of the journey.

The *Namur* is stated to be 40 per cent. less in power than a large class of engine now in the course of construction for the London and North Western Company, under Mr. Crampton's superintendence. This engine will, we believe, have 5 per cent more power than the best engines at present on the narrow gauge lines—in safety, we should imagine it will be superior beyond all comparison. We have now to ascertain what the *Namur* will do when it gets into good working order, and has no drawback of hot axles, and the circumstances attendant upon the working out a new arrangement like Mr. Crampton's. The first trip taken by the above engine was on Saturday last. On that occasion she was attached to a special train to Tring, in order to enable the directors of the Namur and Liege Company to form an opinion of her working. Among those who went down were Mr. A. Spottiswoode, the chairman of the company; Mr. J. Gurney, the deputy chairman; Mr. A. Grey and Mr. F. Reynolds, two of the directors; the secretary, Mr. Cary; the engineer, Mr. G. Rennie, the patentee, Mr. Crampton; and the manufacturer, Mr. Tulk.

We look with anxiety for the working of Mr. Crampton's engine, when it shall have got into thorough running order.

Proceedings of Public Companies.

MEETINGS DURING THE ENSUING WEEK.

MONDAY.....British American Land Company—London Tavern, at Two.
National Brazilian Mining Association—offices, at One.
TUESDAY.....United General Gas-Light Company—offices, at One.
Eastern Counties and Thames Junction Railway—offices, at Eleven.
WEDNESDAY...British Colonial Bank and Loan Company—offices, at One.
West London Railway—London Tavern, at One.
THURSDAY.....New Brunswick and Nova Scotia Land Company—offices, Twelve for One.
Bristol and Exeter Railway—White Lion Hotel, Bristol, at One.
Nister Dale Iron Company—offices, at One.
Victoria Life Assurance and Loan Company—office, at One.
Harrowbarrow (Old) Mining Company—Plymouth.
FRIDAY.....West London Railway—London Tavern, at One.
Western Australian Company—offices, at One.
SATURDAY.....Irish Waste Land Improvement Soc.—King's Head Tav., Twelve for One.

[The meetings of Mining Companies are inserted among the Mining Intelligence.]

BIRMINGHAM AND OXFORD JUNCTION RAILWAY.—A half-yearly fully-attended meeting of the proprietors from all parts of the country, was held on Saturday last, at Birmingham—it being generally understood that the grand question of the leasing of the line to the Great Western would be brought before them. Among those present were the Right Hon. Lord Hatherton; R. Spooner, Esq., M.P.; C. Russell, Esq., M.P.; Capt. Carnegie, M.P.; Charles Stevens, Esq.; Hon. J. C. Talbot; J. W. Wheatley, Esq; W. Mathews, Esq.; S. Beale, Esq.; C. Shaw, Esq.; E. Mozley, Esq. (of Liverpool); C. Saunders, Esq.; I. K. Brunel, Esq.; Samuel Carter, Esq.; Messrs. Addison, Simons, Barlow, Marriott, &c.—P. H. MUNTZ, Esq. (chairman of the company, and brother of Mr. Muntz, M.P.), presided.—Mr. J. W. KERSHAW (the secretary) having read the advertisement convening the meeting, and also the report, which was very brief, and merely referred to the measures which were being taken to forward the works, and to the circumstance of a call of 5*l.* being about to be made, the CHAIRMAN moved the adoption of the report, and, in doing so, begged to state, that every effort would be made to complete the line as speedily as possible. Some unavoidable delays had taken place, but he had no doubt that it would be completed within the specified time. Considerable purchases of property had been made, but, owing to a great portion of it being in the neighbourhood of Birmingham, and being leased and under-leased, some difficulty was found in effecting the purchases. The works have now commenced at Fenny Compton and at Birmingham. With regard to the delay in getting the transfers made, it arose in consequence of the impossibility of getting them completed as rapidly as they were applied for; they had had as many as 150 applications for transfers in one day. So great an interest was felt in the undertaking, that out of the last call, amounting to 170,000*l.*, there had been already 150,000*l.* paid in, which would show the general feeling respecting the company—indeed, so anxious were some gentlemen to make sure of having paid their calls, that they wished to pay them twice over! Large payments had been made for the purchase of property, it had been found necessary to make another call of 5*l.*, payable in April. He wished to take this opportunity of stating, that since the agreement with the Great Western had been completed, an offer had been made by the London and North Western, of much higher terms. He felt it his duty to make this intimation in consequence of what has since occurred. The directors could not accept the offer of the London and North Western to take the line at 15*l.* premium, because they had ratified the bargain with the Great Western Company. Mr. Mozley was the gentleman who gave the first intimation of the intention of the London and North Western to make this offer.—Mr. MOZLEY acknowledged having made the offer; but that it was not in the name of the company.—The CHAIRMAN said, that company had since then made the same offer, but it was after the line had been legally sold to the Great Western, which had the effect of creating an unpleasant feeling. He then went into a statement of the various circumstances alluded to in the letter of Mr. Mozley, which some time ago appeared in the public papers, and denied that the directors had done anything wrong; they had but carried out the wishes of the shareholders—and, the agreement being made, they would abide by it: he then moved, that the report be adopted.—After a rather violent discussion, full of bitter remarks, the meeting was adjourned till Saturday, the 13th inst.

BIRMINGHAM, WOLVERHAMPTON, AND DUDLEY RAILWAY.—An ordinary meeting of the proprietors was held on Saturday, at Birmingham. The Right Hon. Lord Hatherton, and the principal directors, were present.—WILLIAM MATHEWS, Esq. (the chairman) presided: he announced that they had obtained their bill, and had made the necessary purchases of the land to carry out the undertaking.—Mr. KERSHAW read the report and statement of accounts—the balance on the 31st of December, 1846, being 51,066*l.* 11s.—The CHAIRMAN, in moving that the report be received, and the proceedings confirmed, observed, that so anxious were the shareholders to carry out the project, that, out of a call made on the 10th of February of upwards of 100,000*l.*, more than 80,000*l.* had been paid, which proved that their affairs were in a most satisfactory state. They would soon have to make another call, and he had no doubt it would be as eagerly responded to, so that they might have the necessary means to carry on the undertaking.—The report and resolutions were unanimously agreed to, and a vote of thanks to the chairman passed.

BRISTOL AND EXETER RAILWAY.—The half-yearly general meeting of shareholders was held, at the White Lion Hotel, Bristol, on Thursday last—JOHN BROWNE, Esq., in the chair.—The CHAIRMAN said the directors laid their half-yearly report before the meeting with much pleasure, and directed attention to the statement of rents and tolls, as affording evidence of the increased and increasing prosperity of the undertaking. So satisfactory a statement gave a well-founded hope that the traffic of the line would be such as, after the termination of the lease to the Great Western Company, to yield a handsome return to the shareholders upon the capital they had invested. The branches to Castle Cary and Bleadon were calculated to afford such ample accommodation to the public, that the directors did not anticipate any difficulty in obtaining the sanction of the Legislature to them. It would be seen in the report, that the bill for the line from Crediton to Launceston had been rejected on the Standing Orders. The directors felt it due to their engineer, Mr. Gregory, to state that they completely exonerated him from the responsibility. The time after his appointment as engineer to the company was so short, that he told the directors he would do what he could, but could not pledge himself to be able to complete all the plans and surveys. The directors had every reason to be satisfied with his zeal and ability; and they also felt it due to say that Mr. Brunel had, as far as was consistent with his duty to the Great Western Company, lent them every assistance in his power. The works upon the branch to Yeovil had been purposely delayed, the directors having thought it advisable to well consider what point of junction would be best. The directors had under consideration, and would be prepared at the proper time to take all necessary measures for supplying the plant which would be required to work their line at the termination of the lease to the Great Western Company. The directors deeply regretted the resignation of their most valued chairman, Mr. Gibbs; but considered themselves fortunate in having obtained so influential and respectable a gentleman for his successor as Mr. Buller, of Downs.—The SECRETARY then read the report, in substance the same as the chairman's speech. The amount of rent and share of toll, stated by the Great Western Railway to be due to the Bristol and Exeter for the half-year ending 13th Dec., is 49,683*l.*, being an increase of 291*l.* on the last half year, and 1144*l.* on the corresponding half of 1845. The revenue account showed a clear disposable balance of 27,368*l.*, out of which a dividend of 1*l.* 13s. 9d. per 100*l.* share, was declared equally to 4½ per cent. on the 75*l.* paid-up, and leaving a surplus of 2055*l.* The statement of receipts and expenditure showed a balance to 31st Dec. of 65,008*l.* Some conversation ensued, in the course of which the chairman stated that the directors had no doubt of an amicable understanding with the Great Western Company as to the plant to which the Bristol and Exeter Company would have to take in sufficient time to enable them to arrange for the working of the line themselves upon the termination of the lease. It was also stated that the directors did not intend to oppose the Great Western Company before Parliament. The report was then adopted, the retiring directors re-elected, and the dividend recommended declared, after which the meeting broke up.

GREAT NORTH OF INDIA RAILWAY.—On Wednesday, an adjourned extraordinary general meeting of this company, took place at the office, in Coleman-street-buildings.—H. BORRADAILE, Esq., took the chair; when Major GRAFTER (the secretary) read the report, detailing the negociations of the directors with the East India Company, but which had not yet met with any successful result.—The CHAIRMAN said, another memorial had been sent to the hon. Court on the 27th of Feb.—The SECRETARY then submitted the resolution, to the effect, of enabling the directors to negociate with the hon. East India Company, or any other company, for the purpose of amalgamation, or otherwise, as might be most to the interest of the shareholders; also, to suspend proceedings with the bill in Parliament, unless found necessary to maintain the standing of the company before the Legislature.—Mr. G. ALAINWARING asked, if the East Indian and the Great Western of Bengal Company had not amalgamated?—Capt. HITCHINS said, they were in treaty for that purpose; this company was also ready to negociate for amalgamation. (Hear, hear.)—Mr. G. ALAINWARING wished to know, if this line were refused, would the directors try for a line beyond Delhi?—Capt. HITCHINS said, they could then try for a line beyond Delhi; but, of course, with the sanction of the proprietors. (Hear, hear.)—The CHAIRMAN, in reply to a shareholder, said, the guarantee of the hon. Company did not apply to the lines of cheap construction like theirs, but only the more expensive lines, so that this company did not look for a guarantee.—The report and resolutions having been passed unanimously, Mr. BATEN moved, and Mr. BARNINGTON seconded, a vote of thanks to the chairman and directors, which was agreed to unanimously.—The SECRETARY reminded the shareholders of the necessity of their registering, as they would lose the benefits as shareholders in case the company was sanctioned.

CALEDONIAN RAILWAY COMPANY.—The ordinary general meeting of the shareholders was held at Gibb's Royal Hotel, Edinburgh, on Saturday last—John J. Johnstone, Esq., M.P., the chairman of the company, presiding.—After reading the advertisement calling the meeting, the company's seal was affixed to the registered list of shareholders.—The directors' report was then read. It stated that forty miles will be opened for traffic in the ensuing autumn, and the whole line in twelve months.—The CHAIRMAN said that the report was so full and satisfactory as not to require him to say much upon it, farther than to congratulate them upon the thriving and prosperous state of the company. He then noticed the charge brought against the Caledonian Company by Mr. Learmonth, the chairman of the North British, at the meeting held on the previous day, that in their proceedings in the south and north of Scotland, they had manifested a grasping and monopolising spirit. The directors of the Caledonian were now somewhat accustomed to such terms, and they consequently did not fall very heavily upon them. However, he must say, that in charging them with a grasping spirit, justice was not done to them, because he was not aware that they had ever grasped anything which did not naturally and rightfully belong to them. There was nothing grasping in their conduct in seeking to make branch railways, leading eight or ten miles into districts intersected by their main line. Were they, he would ask, to be tied down at their southern end to a bare line, and not allowed to stretch out their arms a yard in any one direction? Their proceedings in the north were also referred to, and it was said that they were pushing their connections in a manner inconvenient to, and inconsistent with, the fair claims of other companies. No doubt they had established a connection there, but it was a very natural and proper connection, beneficial to themselves and advantageous to the public. This was not done in a monopolising spirit, or to throw obstructions in the way in which the transfer of traffic should naturally flow. They rested their hopes of remuneration upon the fair traffic which should arise from these lines, and upon the additional traffic which these lines should bring to their own line. He denied that the Caledonian had taken up any position that was calculated to put an end to any negociations for promoting an equitable and definite settlement, by which all the companies concerned would be put upon something like a territorial basis, each being allowed to work out its own plans in a manner beneficial to itself and advantageous to the public. He concluded by moving, that the reports of the directors and engineers, together with the statement of the receipts and expenditure, should be approved of.—Colonel M'DONALD seconded the motion, which was agreed to.—Mr. LUMSDEN (Glasgow) moved the thanks of the meeting to the chairman and directors, which being seconded, was unanimously agreed to.—The CHAIRMAN acknowledged the compliment; and this concluded the business of the half-yearly meeting

The shareholders then formed themselves into a Special Meeting, for the purpose of considering the propriety of leasing the Scottish Central, the Wishaw and Coltness, and the Glasgow, Kilmarnock, and Ardrossan Railways.

The CHAIRMAN said that the proposal to lease the Scottish Central Railway, in conjunction with the London and North Western and Lancaster and Carlisle Railways, had been gone into, after a full consultation with all the parties interested. It had been entered into by the directors, with a sincere conviction that it would, on the whole, be exceedingly advantageous for the Caledonian, inasmuch as it would bring them into immediate connection with a very active and extensive population in the north of Scotland, and would afford them the means of making a continuous route from London to Perth, without subjecting the passengers to the inconvenience arising from change of carriage and similar causes. The chairman concluded by moving accordingly; and the motion was unanimously agreed to.—Mr. BAYDGES withdrew his motion against the running of trains on the Sabbath, as the question would be fully argued at the forthcoming meeting of the Edinburgh and Glasgow Company.

A SHAREHOLDER here asked whether, among the numerous amalgamations or leases entered into by the Caledonian, in connection with other great lines, there had been any offers of lease or amalgamation made to the Caledonian itself, or whether any were likely to be made?

The CHAIRMAN, in reply, said that no offer of lease had been made; and that it was not a point which the directors had at all pressed forward. The directors thought the wiser course was to go on completing their arrangements—thus placing themselves in a position to show what the actual amount of their traffic would be, before they entered into any connection of the kind referred to by the hon. gentleman. As to the probability of such an arrangement, he would only say that it was a likely and a natural thing, that eventually something of the kind would be completed with the southern companies, with whom they had at present the best and most perfect understanding as to the mode in which their traffic would be carried and interchanged; and the best proof of this was, that the London and North Western Company had one of their directors at the Caledonian board.—The meeting then separated.

THE SCOTCH RAILWAYS—MONTHLY REPORT.

FEBRUARY.—Prices have steadily improved all this month—more particularly since Lord George Bentinck's proposed loan to the Irish Railway companies has been set aside, and the announcement has appeared in the "Budget" of no farther taxation being required to meet present emergencies. Eight millions sterling is to be added during the year to the permanent debt—a sum which will be obtained at less than 3½ per cent, and which cannot cause the slightest inconvenience to the money market. From present appearances, there will be a further advance in prices, particularly of the better class of railway shares—but with the increased rate of interest, which now rules in every department, we cannot expect to see them rise to what they were three months ago. The principal feature of this month, is that of the various half-yearly railway meetings, most of which have recently been held; and, in almost every instance, with very gratifying results. The North British have declined Mr. Hudson's advances, and are likely, this summer, to show a large traffic on their main line. At their meeting on the 25th, a dividend of 5 per cent. was declared; the quarters, in so far as called up, are in future to receive 5 per cent.; and 87,000 of new stock was created in 13,920 shares, of 6½*l.* each, to make up for the over-issue of these quarters, which has already taken place. The works of the Edinburgh and Northern appear to progress more satisfactorily. Those of the Scottish Central are less forward than was expected, and that part of the line from Castlecarry to Stirling will not be opened in July, as was at one time proposed. At the general meeting on 26th ult., some astonishment was expressed at the peculiar wording of the agreement with the London and North Western; and, certainly, if the result of leasing our Scottish lines to English companies be no better than what this of the Scottish Central promises to be, fewer of them will probably henceforth be sought. The Dundee and Perth announce an arrangement with the Caledonian, who have undertaken to lease them at 8 per cent., on an extended capital of 450,000*l.*—a bargain which, we rather think, there may be some difficulty in carrying into execution, although, in the meanwhile, it has had the effect of running up Dundee and Perth stock fully 10*l.* per share. The Scottish Midland double their present capital by the creation of 12,000 additional shares of 25*l.*, for the purpose of forming branches, as well as of laying a double set of rails throughout; and expect to obtain the North Western guarantee on the whole 600,000*l.*, at the rate of 6 or 6½ per cent. This equally accounts for the recent rise of nearly 5*l.* on the shares of that company. The Caledonian promise to open the southern end of their line—that is, from Carlisle to Beattock—for the autumn traffic. The Ayrshire Railway will continue its dividend of 7 per cent., with a further addition to the reserve fund; and the Edinburgh and Glasgow propose to pay 8 per cent. for the half-year, besides the 6 per cent. declared, but not divided, at the last general meeting. This is a most gratifying commencement of the present directors' operations, although, from the unfortunate deficiency in the company's plant—which they have made very exertion to remedy—they have been subjected to great blame and much annoyance. We deprecate any change at the approaching meeting; and if the matters mainly under discussion be left to the Scotch shareholders, we believe there will be none. Power is intended to be taken at this meeting (5th March) to capitalise the whole debt of the company, as well as to make further calls on the half shares. The promoters of the Edinburgh and Perth new scheme have issued 12½*l.* shares for the construction of contemplated branches. The British and Irish have made a final return of 2s. 6d. per share.

ROBERT & THOMAS ALLAN: *Edinburgh.*

ATMOSPHERIC RAILWAY SYSTEM—FIRST TRIAL AT EXETER.—The atmospheric principle was tried yesterday for the first time. The piston carriage started from the Exeter station a little after six last evening. There were present Messrs. Samuda and Atkinson, the atmospheric engineers, Mr. Margary, the resident engineer, Mr. Clark, the superintendent of the line, Mr. Marshall, the contractors' agent, Dr. Miller, Mr. Ralph Sanders, &c. The piston carriage was attended by a locomotive, which propelled to the pipe at starting. An exhaustion of seventeen inches was readily obtained, fourteen being a working pressure. Everything was found to answer exceedingly well. The carriage stopped at the St. Thomas's station with great precision. It was perfectly under command, and the oscillation was comparatively nothing to that of the locomotive. The experiment was very cautiously effected, in consequence of the pipes never having yet been thoroughly gone through. But it fully answered the expectations of all concerned, and must have been very gratifying to the patentee, Mr. Samuda, and to Mr. Atkinson, who has had the chief management of the preparations. The inventor, Mr. Clegg, was not present, we believe. He ought not to be forgotten in the triumph of a principle which has cost him years of labour and anxiety, though younger and more influential hands have taken the burthen and the glory of its full achievment.—*Western Times.*

VULCANIZED INDIA-RUBBER BUFFER SPRINGS.—An application of what is termed "Vulcanized India-rubber" to the springs of the buffers of railway carriages has been patented by Messrs. Fuller and De Bergue, and is in use in some of the carriages on the Great Western Railway and on the Eastern Counties Railway. The invention appears to be important, and is stated to have been examined and approved of by Messrs. R. Stephenson, W. Cubit, Brunel, and other competent judges. The buffer springs of Messrs. Fuller combine simplicity with security; and the inventors contend that they are superior to the steel springs usually employed in buffers, because they are at their commencement more elastic and more easily acted upon; the power of their resistance, after yielding to a certain extent, increases in such a ratio as to prevent the possibility of the buffer head being brought to a dead hard stop, and consequently in cases of collision results less dangerous than those which generally ensue can be anticipated. Their lightness, and the facility with which their power may be regulated, are also important advantages. It is difficult, without an experienced judgment, and the practical knowledge of engineering, to give an opinion on such an invention as this that shall be either valuable or influential, but it may be of benefit to the public to call their attention to it.

ROYAL CORNWALL POLYTECHNIC SOCIETY.—The Council of H. R. H. the Prince of Wales have been pleased to recommend to her Majesty to sanction the payment of a donation of 20 guineas to the Polytechnic Society from the revenues of the Duchy of Cornwall, in consideration of the practical tendency and beneficial bearing of the Institution on the Interests of the county.

HARROWBARROW OLD MINE.—A meeting will be held on Thursday next, the 11th, at Plymouth, and will then be adjourned to remain for the following day.

IRISH WASTE LAND IMPROVEMENT SOCIETY,

5, ST. MILDRED'S-COURT, POULTRY, LONDON.

Notice is hereby given, that a sufficient number of shareholders to constitute a GENERAL MEETING not having attended on the 27th ult., at the King's Head Tavern, in the Poultry, as above, the place appointed for such meeting by former advertisement, the same was, in conformity with the provisions of the Act of Incorporation, ADJOURNED to Saturday, the 13th inst., at Twelve for One o'clock precisely, to be then HELD at the tavern above described.—March 1, 1847. FREDERICK FRY, Secretary.

DARTMOOR CONSOLS TIN MINING COMPANY,

SHEEPSTOR, COUNTY OF DEVON.

TO BE WORKED ON THE COST-BOOK PRINCIPLE.

In 2048 shares, of £2 each.

COMMITTEE OF MANAGEMENT.

JOHN BANKES, Esq., Clapham Common, Clapham.
JOHN T. BENETT, Esq., Canonbury Cottage, Islington.
JOHN SELBY, Esq., Windsor.
R. B. SULLOCK, Esq., Teignmouth, Devon.

(Three additional managers will be elected from the shareholders holding 30 shares and upwards).

CONSULTING ENGINEER.

J. R. Monkhouse, Esq., 18, Charles-street, St. James. 58

SOLICITORS.

Messrs. Willesford & Tucker, Tavistock, Devon.

BANKERS.

Messrs. Jones, Loyd, and Co., Lothbury, London; Messrs. Gill and Rundle, Tavistock.

OFFICES, No. 58, LOMBARD-STREET, LONDON.

PROSPECTUS.

The object of this company is to work effectually the Dartmoor Consolidated Tin Mines, in the parish of Sheepstor, in the county of Devon, the sett of which is very extensive—being about three miles in length and two miles in width—in the centre of a very productive mining district.

The Dartmoor Consolidated Mines were worked some years prior to January, 1844, when, on account of the extremely low price of tin, and a difficulty arising respecting the renewal of the lease, the operations were suspended, after making returns to the shareholders of upwards of £30,000.

A considerable sum has been expended in the erection of the necessary buildings for miners, and other purposes, as well as for machinery. The smelting-house is of sufficient size, and capable of smelting all the tin raised in the county. The company have the privilege of cutting turf to any extent, for the purpose of the mines and for smelting operations. It is, therefore, proposed to commence working the present lodes at once, so as to open new and deeper levels, and to extend those at present in existence—to cross-cut other lodes, and effectually and economically to work the mine on the most approved principle of modern mining.

The present price of tin offers great advantages to parties investing their money in this company, especially as there is little doubt of the price of this metal increasing considerably, in consequence (among other causes) of the Great Wheal Vor Mine having been suspended, and which mine returned one-fourth of all the tin raised in England.

The sett is held under a lease from the Lord of the Manor, at a rent of £5 per annum, and at the reduced royalty of 1-20th, for a term of 21 years, from 25th Dec., 1845.

A general meeting of the proprietors will be held half-yearly, at which a full report of the company's affairs will be submitted by the committee of management.

The operations of the company are to be carried on under the "Cost-Book" principle, which exempts the company from the provisions of the Act for the Registration of Joint-Stock Companies (7 and 8 Vic., cap. 110); the 63d section of which enacts—

"Provided always, and be it enacted, That nothing in this Act contained shall extend, or be construed to extend, to any partnership formed for the working of mines, minerals, and quarries, of what nature soever, on the principle commonly called the Cost-Book principle."

Under the "Cost-Book" principle, shareholders have the right of determining their responsibility, by giving notice of their intention to relinquish their shares, and on forfeiture of all previous payments. The 21st clause states—

"That any adventurer or shareholder may determine his or her responsibility or liability, with respect to the affairs of this mine, upon his or her giving notice, in writing, to the purser of the company, for the time being, of his or her desire of retiring from the company, and also upon depositing with the said purser the share or shares held by him or her, and signing a relinquishment of all claims or demands on the company in respect to such share or shares."

The reports of the mining agents (one of which is hereunto appended) will at once show that the state of the mine will forthwith realise a liberal profit to the shareholders.

Applications for shares to be made to the committee, at the offices of the company, No. 58, Lombard-street, where prospectuses may be had—plans, specimens, reports, and rules inspected, and every information obtained; to Charles Godwin, Esq., 2, Royal Exchange-buildings; Mr. J. Lane, 75, Old Broad-street; R. Tripp, Esq., 12, High-street, Exeter; Messrs. Willesford and Tucker, Tavistock, Devon; and at the Engineer's, 18, Charles-street St. James's; also, at the office of the *Mining Journal*, 26, Fleet-st., London.

COPY OF THE REPORT OF CAPTAIN JOHN SPARGO.

According to your request, I have been to inspect this mine. I am happy to inform you, that I cannot but give a favourable report. It is my opinion, that there is not such a speculation as the Dartmoor Consols again in the county. I have no doubt, if this mine is properly managed, it will, in a short time, give good dividends to the proprietors. The shuts of tin that will be discovered after the water is in fork, will be around those two cross-courses—I have sent a rough sketch, so that you may understand my meaning. Between the caunter lode and cross-course the present engine-shaft is sunk: I cannot say the exact distance, but, I think, about 200 fathoms from the wheel. Now, from the first shaft to the cross-course is about 40 fathoms, where the ground is quite congenial for tin, there has been rich bunches of tin discovered, and the greater part taken away. I would advise you to sink this engine-shaft, as well as the eastern one; and, it is my opinion, that there will be abundance of tin discovered around those cross-courses—if so that you extend your levels to a full length, so as to intersect those runs of tin. I have had long experience of minerals and strata, and I do not recollect seeing a better tin strata than that in this mine. The strata is a beautiful decomposed granite. The capel that is to the north part of the lode is much composed of felspar, which is altogether congenial for tin. Now, to work the mine in a proper mine-like manner, you need sink both the engine-shafts 10 fathoms deeper before driving under the sheets of tin gone down under the old workings; you will bear in mind, the shaft is not sunk under the 10 fathom level. Now, after the two shafts are sunk 10 fathoms deeper, you can then drive on the course of the lode, both east and west; and I have no doubt, after so doing, you will be in a position to raise large quantities of tin; and, I think, the deeper levels will be more productive, as every surface indication tells me that the lode is not as yet in possession of its surrounding properties, as the country around the lode is full of small fibres, or droppers, dipping towards the lode, and it is impossible, according to the underlay of them, that one-half of those droppers could intersect the lode at the present depth of the mine.—Around Pryce Deacon's shaft the ground is quite congenial for tin; and, it is my opinion, that, if this mine was carried on and prosecuted in a proper mine-like manner, it would amply reward the adventurers for their outlay. By an outlay of £2000, you may put the whole of the machinery and buildings in good and sufficient repair, and sink the shaft 20 fathoms deeper, and extend the levels, so as to get tin in the market. Now, between Pryce Deacon's shaft and old engine-shaft there certainly must be abundance of tin, for the following reasons:—

1. It is seldom known where a cross-course comes in contact with the lode, that it falls from making rich bunches of tin, and especially in such a strata as decomposed granite, such as in this mine.

2. It appears that, if Pryce Deacon's shaft was sunk 20 fathoms deeper, the lode would get into a more settled country, as there is a strata of dark soft granite, much composed of blue peach, bearing down a right angle towards the lode, which altogether strongly indicates for tin.

3. There is small fibres of wolfrome (commonly called cockel by the miners) dropping towards the lode, which, of course, are feeders, and must ultimately fall into the lode in depth. I find some parts of this strata has already intersected the lode west of Wildford shaft, and, at the depth of 20 fathoms, it will completely unbottom the present strata; if so, it takes its regular course.

There are two cross-courses that run through this mine; and it is my opinion, that, at the depth of 20 fathoms, they will cross the lodes in this most congenial strata. I would advise you, also, to drive east from Pryce Deacon's shaft, where you will intersect another cross-course—and at the same time drive west; and, by doing so, you will intersect another lode, where, I expect, you will discover rich bunches of tin.

I have no doubt whatever but that this mine will immediately give dividends after you extend away your levels, so as to get backs to some length, to employ sufficient hands to stope away the back, so as to keep the stamps to work.

There is a sufficient supply of water to work all the machinery necessary for the mine, which is a great advantage. I can highly recommend this mine to you and your friends—I do not know where you can find a better speculation, as a tin mine, in the two counties. I do also think, there are several other lodes in this mine that are not yet discovered, and by driving north on the cross-course would prove this, which can be done very cheap. (Signed) JOHN SPARGO.

COPY OF THE REPORT OF ASSAY OF JOHN RYAN, Esq., M.D.

The sample of "tin ore," from the "Dartmoor Consols Mine," gives, on analysis, 24 per cent. of metallic tin. You must consider this, then, as a most excellent and productive vein. (Signed) JOHN RYAN, M.D.

Laboratory, Royal Polytechnic Institution, Feb. 6, 1847.

COOMBE VALLEY SLATE COMPANY.

Capital £5000, in 1000 shares, of £5 each.—Deposit £1 per share.

CONDUCTED ON THE COST-BOOK SYSTEM.

OFFICE, No. 5, WHITEFRIARS-STREET, FLEET-STREET, LONDON. 59

The proprietors of this extensive undertaking having, after several months of persevering industry, now opened a large piece of rock, and sunk to a sufficient depth to prove its quality, take this opportunity of presenting to the public (free from any risk) a participation of its advantages, and in the several proportions as above-described.

The quarry was commenced, and will be conducted, by a party of practical men (merchants and traders), whose object it is to carry it out on a principle never yet attempted by any other company. The resources they have of turning every thing into immediate account, which, by means of improved machinery, they are enabled to do to the greatest advantage; inasmuch that what is in most quarries called waste, will in this be made marketable. They have now on hand orders for thousands of tons of slate, of every description, waiting to be supplied, which, when executed, will be turned into ready cash. There will be no expensive offices to keep up, as all the agents will be remunerated by a responsible commission, at a per centage. The strictest economy will be observed, and all the accounts open, at all times, to the inspection of the shareholders. The quarry is situate in the parish of St. Gimes, in the county of Cornwall, one mile from the shipping port of Cragington, on the Bristol Channel, and consists of about 7 acres of land, all one entire bed of fine blue slate, 6 feet below the surface. A river runs through the estate, that will be made available for driving the machinery. The lease is granted for a term of 21 years, at the nominal rent of £10 per annum, with no royalty.

The management of the company will be vested in the hands of three trustees, and 13 committee men—the whole of them connected, more or less, with the sale or manufacture of slate.

Detailed estimates, carefully prepared, from actual experience, with sectional drawings of the sett and present workings, have been made, which, with specimens of the slate, may be seen at the office of the company, where prospectuses, and every information, can be obtained.—Applications for shares, in the usual way, may be made to Mr. James Lane, mining share agent, 75, Broad-street, City, London; Mr. T. Sanford, Exeter; Messrs. Teyth and Luscombe, Plymouth; Mr. T. Carpenter, Callington; Mr. J. Huxham, Launceston; and of Mr. [illegible] Richardson, secretary, at the office of the company.

ROYAL COLLEGE OF CHEMISTRY,

HANOVER-SQUARE, LONDON.

THE PRACTICAL COURSE OF SCIENTIFIC INSTRUCTION

in this institution is under the direction of Dr. A. W. HOFMAN, assisted by Dr. JOHN BLYTH, and junior assistants.

The FOURTH SESSION WILL COMMENCE on MONDAY, the 8th of March next, in the NEW LABORATORY, and end on the 31st July.

The fee for students, working every day during the session, is		£12	10 0
" " "	Four days in the week	10	0 0
" " "	Three days "	8	0 0
" " "	Two days "	6	0 0
" " "	One day "	4	0 0

60

The hours of attendance are from Nine to Five.—Further particulars may be obtained on application to the secretary, at the office of the college, Hanover-square.

By order of the council,
WILLIAM JOHNSON, Secretary.

IMPORTANT TO ENGINEERS, MANUFACTURERS, RAILWAY AND STEAM-BOAT COMPANIES.

Messrs. W. & C. MATHER beg to call the attention of the ABOVE PARTIES to their

IMPROVED PATENT ELASTIC METALLIC PISTONS. 61

The PRINCIPAL FEATURE and ADVANTAGE of THIS IMPROVEMENT is

1. Its great ELASTICITY and SELF-ADJUSTING PROPERTIES, which enable it to yield to any inaccuracy of the cylinder, whether oval or taper, and to move with the least possible friction.

2. Its extreme SIMPLICITY and LIGHTNESS, consisting of only two pieces of metal, having the vertical and lateral pressure in due and proper proportion, independent of each other.

3. It takes the LEAST possible SPACE, and is well adapted for air and water-pumps, as it allows of a larger water way.

Messrs. W. & C. MATHER feel confident that it is the BEST ELASTIC METALLIC PACKING yet known, for the above reasons.

Models may be seen at the Salford Iron-Works, Manchester; at W. Barker's, engineer, Newton-Moor; and also at J. Mather's, engineer, Beaufort-street, Chelsea, London.

TO RAILWAY COMPANIES, CONTRACTORS, AND OTHERS,

requiring RAILWAY AXLES, WHEELS, and IRONWORK for CARRIAGES, &c.; also IRON and STRAINED WIRE FENCES, may be SUPPLIED by

MR. EDWARD HILL, 62

OF BRIERLEY HILL IRON-WORKS, NEAR DUDLEY,

who will give the BEST PRICES for OLD AXLES, and any description of SCRAP IRON

PNEUMATIC ENGINE AND SAFETY RAILWAY CARRIAGE COMPANY.

UNDER ROYAL LETTERS PATENT.

Capital £300,000, in 50,000 shares, of £10 each.—Deposit 5s. per share. 63

The first call will not exceed 10s. per share.

The object of this company is to introduce a new system of propulsion, which will supersede the necessity of steam for railways, stationary engines, navigation, and in all other cases where motive-power is required, by the substitution of a new means of power, derived from the atmosphere alone, without the use of lineal tubes, stationary engines, or local machinery of any kind.

Prospectuses, with full details, will be ready in a few days, and may be obtained of Messrs. Wm. Barry and Co., 7, Birchin-lane, Cornhill, and Messrs. Lamond and Co., Hall of Commerce, by whom applications for shares will be received in London.

SHATTERFORD COAL AND IRON MINING COMPANY.

PROVISIONALLY REGISTERED.

Capital £50,000, in 10,000 shares, of £5 each.—Deposit limited, by the 7th and 8th Vic., to 6d. per share, until complete registration.

MINING ENGINEER—Mr. FRANCIS BRISCOE, West Bromwich. 64

This company is projected for the purpose of working the valuable coal beds on the estate of Shatterford, in the county of Stafford; from which the coal may be conveyed by the Severn to Worcester, Gloucester, and other places, or sold in the immediate neighbourhood of Kidderminster, Bewdley, and Stourport, where the demand is extensive, and rapidly increasing.

The only shaft at present sunk has reached two beds of excellent coal—the lower one at about 22 feet from the surface. This coal is selling at an average of 9s. 6d. per ton at the pit's mouth, but hitherto the labour expended on it has not raised coal in sufficient quantities to supply the neighbourhood. The object of this company, therefore, is, by supplying the necessary capital, to extend the sphere of its operations.

The two beds of coal indeed, already in operation, are sufficient to secure the objects of the company; but, beyond this, there is not a doubt, from the nature of the geological formation, that more valuable coal than that already reached lies at a greater depth; and there is also every probability—nay, almost a certainty—of ironstone being found, as is the case in all coal mines, of similar formation, in these districts.

The estimated profits in the working of the two beds of coal already reached, will give very large dividends to the shareholders, without any chances contingent on the extension of the workings; and, therefore, as there is nothing of a speculative character in the undertaking, it presents a perfectly safe investment for capital. In the deed of settlement, the liability of the shareholders will be limited to the amount of their shares respectively; and power will be given to the directors to increase or diminish the capital, and to consider the company formed, when two-thirds of the capital are subscribed for.

No call will exceed 10s. per share.

Shatterford is distant from the Severn, 1¼ mile; Kidderminster, 4 miles; Bewdley, 3½ miles; Stourport, 6¼ miles; Cleobury Mortimer, 6 miles; Bridgenorth, 9 miles; Worcester, 15 miles; Wolverhampton, 14 miles.

Prospectuses, with the names of the directors, and forms of application, may be obtained at the company's offices, No. 7, Adam-street, Adelphi, where applications for shares are to be addressed to the managing director; or to Messrs. W. H. Collis and Smith, stockbrokers, New-street, Birmingham, in the usual form.

NO APPLICATIONS FOR SHARES, except from the country, will be RECEIVED after WEDNESDAY next, the 10th inst.

Adam-street, Adelphi, London, March 5, 1847.

PATENT METAL-CORED RAILWAY SLEEPER COMPANY.

Capital £100,000, in 10,000 shares, of £10 each.—Deposit 1s. per share, as limited by 1 and 2 Vic., cap. 110, to be made up to £1 per share on complete registration.

Not less than Three Months interval for future Calls.

PROVISIONAL DIRECTORS. 65

JOHN BRAITHWAITE, Esq., C.E., 39, Bedford-square.
JOHN FULFORD OWEN, Esq., Ridgway Oaks, Enfield.
CHRISTOPHER R. READ, Esq., Holyport, Berkshire.
HENRY WRENCH, Esq., Priory, Old Windsor.
(With power to add to their number.)

TRUSTEES.

FREDERICK MILDRED, Esq. JOHN WALLER, Esq. HENRY WRENCH, Esq.

BANKERS—Messrs. Masterman, Peters, Mildred, Masterman, and Co.

SOLICITORS—Messrs. Tustin & Barlow, Bridge-street, Blackfriars.

STANDING COUNSEL—Charles Stewart Drewry, Esq.

SUPERINTENDENT—Joseph Orsi, Esq.

PROSPECTUS.

It is remarkable that while great improvements have year after year been made in locomotive engines, the construction of the road upon which those engines are to run has remained without any improvement since the time when the Liverpool and Manchester Railway was made. The great improvements which have been introduced into locomotive engines have now, however, rendered it absolutely necessary for engineers to turn their attention to the best means of improving the construction of what is called the "permanent way" of railways.

With a view to such object, this company has been projected, for the purpose of introducing a new kind of railway sleeper, which has been patented, and which embraces many advantages, besides those of economy and unlimited durability. They have been tested on the London and North-Western (London and Birmingham) for the last 10 months, and for which line a further quantity are in course of manufacture.

Prospectuses, setting forth many of such advantages, and forms of application for shares, may be had at the offices of the company, 1, Guildhall Chambers, Basinghall-street, where specimens of the sleepers may also be inspected.

PATENT METAL-CORED RAILWAY SLEEPER COMPANY.

NOTICE is hereby given, that NO FURTHER APPLICATIONS for SHARES will be RECEIVED after the 16th inst. 66

1, Guildhall Chambers, Basinghall-street, March 4, 1847.

TO ENGINEERS AND BOILER-MAKERS.

LAP-WELDED IRON TUBES FOR STEAM-BOILERS.

THE BIRMINGHAM PATENT IRON TUBE COMPANY,

42, CAMBRIDGE-STREET, BIRMINGHAM, & SMETHWICK, STAFFORDSHIRE,

MANUFACTURE TUBES under an exclusive license from Mr. Richard Prosser, the patentee. These tubes are now very extensively used in the boilers of marine and locomotive steam-engines in England and on the continent—are stronger, lighter, cheaper, and more durable than brass or copper tubes, and warranted not to open in the weld. They may be fixed in the boilers without ferules, and can be taken out and refixed without additional trouble or expense.—Address, 42, Cambridge-street, Crescent, Birmingham;

LONDON WAREHOUSE, 67

68, UPPER THAMES-STREET.

TO ENGINEERS, BOILER-MAKERS, AND OTHERS.—

LAP-WELDED IRON TUBES, FOR STEAM-BOILERS.

W. H. RICHARDSON, JUN., & CO., DARLASTON, 68

STAFFORDSHIRE,

MANUFACTURE all DESCRIPTIONS of WELDED WROUGHT-IRON TUBES, for STEAM, GAS, &c., of any required length and diameter, on the new and unequalled principle of Mr. J. Roose's recent invention (patented August, 1846).—Address as above.

STEAM COAL—WITHOUT SMOKE, as per experiments

made at her Majesty's Dockyard, Woolwich.

CAMERON'S COALBROOK STEAM COAL, AND SWANSEA AND LOUGHOR RAILWAY COMPANY.—(Completely Registered and Incorporated.) 69

OFFICES—2, MOORGATE-STREET, LONDON.

The directors are now prepared to supply steam ship companies, manufacturers, shippers, and others, with the company's steam coal, either at the company's wharf at Swansea, or in London. A statement, showing by comparative trial the superiority of this coal for steam purposes over every other, and a scale of prices, may be had on application at the company's offices here, or at their wharf at Swansea.—March 18, 1846.

BIRMINGHAM, WOLVERHAMPTON, AND DUDLEY RAILWAY.

At the Ordinary Meeting of the Birmingham, Wolverhampton, and Dudley Railway Company, held in pursuance of the provisions of the Act, at Dee's Hotel, Birmingham, on the 27th February, 1847.

WILLIAM MATHEWS, Esq. (the chairman of the company), in the chair.

The Secretary having read the advertisement convening the meeting, the common seal of the company was affixed to the register of shareholders,—

It was moved by the Chairman, and seconded by John Aston, Esq. 70

That the report now read be received and adopted, and printed for circulation amongst the shareholders.

The Chairman having left the chair, it was moved by Charles Russell, Esq., M.P., and seconded by the Lord Hatherton, that the best thanks of the meeting be given to the chairman, for his conduct in the chair, and for his great attention to the interests of the company.

BIRMINGHAM AND OXFORD JUNCTION RAILWAY

At an Ordinary General Meeting of the shareholders of this company, held at Dee's Royal Hotel, in Birmingham, the 27th day of February, 1847,

P. H. MUNTZ, Esq. (chairman of the company), in the chair.

The Secretary read the advertisement convening the meeting; and the common seal of the company was affixed to the register of the shareholders.

The report of the directors was then read, when it was moved and seconded. 71

That the report now read be received.

And thereupon an amendment was moved, seconded, and carried.

"That this meeting be, and the same is hereby adjourned, to Saturday the 13th day of March next, at Four o'clock in the afternoon, at Dee's Royal Hotel, in Birmingham."

CLARENCE RAILWAY.—Notice is hereby given, that a

SPECIAL GENERAL MEETING of the company of proprietors of the CLARENCE RAILWAY will be HELD at the tavern commonly called, or known, by the name of the George and Vulture Tavern, situate in St. Michael's-alley, Cornhill, in the city of London, on Tuesday, the 23d day of March next, to commence at One o'clock in the afternoon, when the draft of a Bill, introduced into Parliament during the present session, intituled, "A Bill to enable the Amalgamation of the Clarence Railway and the Leeds and Thirsk Railway," will be submitted for the approbation of the proprietors.—Dated this 17th day of February, 1847. 72

HENRY BLANSHARD, GEO. W. ROWLEY, } Respectively proprietors possessed of more than five shares each in the above-mentioned undertaking.

CHAS. BENSON, Secretary.

CALEDONIAN RAILWAY.—LOANS ON DEBENTURES.

—The CALEDONIAN RAILWAY COMPANY are prepared to RECEIVE TENDERS of LOANS, on DEBENTURES, in SUMS of not less than FIVE HUNDRED POUNDS, for three or five years—the interest to be PAYABLE half-yearly, in Edinburgh, Glasgow, London, Liverpool, Manchester, or Bristol.—Tenders to be addressed to the Treasurer, Edinburgh. By order of the directors, 73

D. RANKINE, Treasurer.

Caledonian Railway Office, 122, Princes-street, Edinburgh, Jan. 26, 1847.

CALEDONIAN RAILWAY.—At the Fourth Ordinary Half-

Yearly General Meeting of the shareholders of the Caledonian Railway Company, held in pursuance of public advertisement, in Gibb's Royal Hotel, Edinburgh, on Saturday, the 27th day of February, 1847, at One o'clock,

JOHN J. HOPE JOHNSTONE, Esq., M.P. (chairman of the company), in the chair,

The following RESOLUTIONS were proposed, seconded, and carried unanimously:—

1. That the common seal of the company be affixed to the register of shareholders now produced.

2. That the reports of the directors and engineers, and the statements of receipts and expenditure, now read, be received and adopted, and printed and circulated among the shareholders.

The Chairman having intimated that the Extraordinary General Meeting would take place at Two o'clock; and, having left the chair,

It was resolved unanimously,—That the cordial thanks of the meeting be offered to the chairman and directors for the able manner in which they have conducted the affairs of the company, and to the chairman, for his conduct in the chair.

And, at an Extraordinary General Meeting of the shareholders of the company, held in like manner, same place and day, at Two o'clock, 74

JOHN J. HOPE JOHNSTONE, Esq., in the chair,

It was resolved unanimously,—

1. That this meeting sanctions and approves of the proposed joint-lease, or guarantee, of the Scottish Central Railway, and its branches, by this company, in conjunction with the London and North-Western and Lancaster and Carlisle Railway Companies, and authorises the directors to apply to Parliament, and to do all other acts that may be necessary for carrying the same into effect.

2. That this meeting sanctions and approves of the proposed lease, or guarantee, of the Wishaw and Coltness Railway by this company, and authorises the directors to apply to Parliament, and to do all other acts that may be necessary for carrying the same into effect.

3. That this meeting sanctions and approves of the proposed agreement for a lease of, or amalgamation of, the Glasgow, Kilmarnock, and Ardrossan Railway, and its branches, with this railway, and authorises the directors to apply to Parliament, and to do all other acts that may be necessary for carrying the same into effect.

J. J. H. JOHNSTONE, Chairman.

Caledonian Railway Office, 122, Princes-street, Edinburgh, Feb. 27, 1847.

CORNWALL RAILWAY.—At the First Half-yearly Meeting

of the proprietors of this company, held pursuant to advertisement, at the Assembly Room, Truro, on Tuesday, the 23d of February, 1847,

JOSEPH THOMAS TREFFRY, Esq., (chairman), in the chair,

The following resolutions were put from the chair, and carried unanimously:— 75

1. That the common seal of the company be affixed to the register of shareholders, now produced.

2. That the report of the directors, now read, be adopted, and circulated among the proprietors.

3. That Joseph Thomas Treffry, Esq., Thomas James Agar Robartes, Esq., Clement Carlyon, M.D., and John Gwatkin, Esq., be re-elected directors, and that they and the other directors be the directors of the company.

4. That Edw. Clifton Carne, Esq., who now retires from the auditorship, be re-elected.

5. That the best thanks of the shareholders be given to the chairman, deputy-chairman, and the directors, for their exertions in promoting the welfare of the company.

JOSEPH THOMAS TREFFRY, Chairman.

It was resolved,—That the best thanks of the meeting be given to the chairman, for the courteous manner in which he has presided over this meeting.

W. H. BOND, Secretary.

REPORT.

The brief interval which has elapsed since the First Ordinary Meeting of the company, will render any lengthened report unnecessary. Your directors have been engaged in making up and closing the accounts of the expenditure during the past year, and now lay before you the accounts, made up to the 31st of December last, exhibiting a balance in favour of the company of £56,919 16s. 10d. It was not practicable to get all the accounts closed before that time—nor have your directors been yet able to do so in every instance, but they have ascertained that the whole amount of liabilities undischarged, on the 31st of December last, will not exceed £11,000.

The sealed certificates, and the warrants for the payment of the interest to the 29th of September last, have been delivered to the proprietors.

The bill for the deviation between Saltash and Plymouth, and for the amendment of the Cornwall Railway Act, has passed Standing Orders without opposition, and has been read a first time; and will, in compliance with the requisition of Parliament, be submitted for your approval.

Your directors have introduced into this bill a clause, authorising the payment of interest upon all moneys which have been, or may be hereafter, paid up, in respect of shares, at the rate of 5 per cent. per annum, instead of 4 per cent.

From information your directors have received from Mr. Brunel, they have the satisfaction to state, that an offer has been made by an eminent contractor to construct the whole line, including the Saltash-bridge, on terms which your engineer considers it will be decidedly advantageous to accept, and which will ensure the early completion of the works. Your directors, in contemplation of an immediate conclusion of a contract, and the consequent commencement of the works, have deemed it necessary to make a call of £2 10s. on each £50 share, and £1 5s. on each £25 share, payable on 1st March next.

Mr. Treffry, Mr. Robartes, Dr. Carlyon, and Mr. Gwatkin, having retired from the direction, agreeably to the provisions of the Act, these gentlemen are eligible for re-election.

(Signed) J. T. TREFFRY, Chairman.

CORNWALL RAILWAY.—At a Special General Meeting of

the proprietors of this company, held pursuant to advertisement, on Tuesday, the 23d day of February, 1847, 76

JOSEPH THOMAS TREFFRY, Esq., in the chair,

It was resolved,—That the Draft of the Bill to authorise an alteration in the line of the Cornwall Railway, and to amend the Act relating thereto, and for other purposes, which has been submitted to the proprietors of this company at the special meeting, held this day, be approved; and that the directors be authorised to prosecute the same in the present session, and to introduce, or allow to be introduced, therein such alterations, modifications, and additional provisions as they shall deem expedient, or conducive, to the success of the undertaking and the interest of the proprietors.

JOSEPH THOMAS TREFFRY, Chairman.

WEST FLANDERS RAILWAYS COMPANY.—NOTICE

OF CALL.—Notice is hereby given, that the directors have made a further CALL of TWO POUNDS per share, on each and every share in this undertaking, and that the same is made PAYABLE on the 29th day of March instant. 77

The proprietors are required to pay the same on or before the said 29th day of March, to Messrs. Glyn, Halifax, Mills, and Co. Bankers, Lombard-street London.

Interest at the rate of 5 per cent., per annum, will be charged on all sums remaining unpaid after the said 29th day of March; and if any call shall remain unpaid after one month from that date, the shares will become absolutely forfeited, according to the statutes of the company.—Dated this 5th day of March, 1847.

(Signed) W. P. RICHARDS, President.

11, King William-street, Mansion-house. WILLIAM JESSE, Secretary.

ELECTRO-TELEGRAPHIC CONVERSER.—As Inventors

and Patentees of a far more PERFECT and EFFECTIVE TELEGRAPH than any that has hitherto been conceived, for which her Majesty's Royal Letters Patent have been granted to us, we respectfully invite attention to its peculiar applicability, not only to Railways, but likewise to Docks, Mines, and other extensive public works—manufactories, and even private establishments. With the merits, and with the defects, of the various apparatus hitherto employed for Telegraphic purposes, we are perfectly conversant; and we have no hesitation in asserting, that, when the extraordinary advantages of our discovery shall be fully made known, this patent will be universally preferred to every other system.

Complete as our plan at this moment is, and matured as are our arrangements for bringing it into practice, certain legal forms, as well as the dictates of prudence, will, for some time longer, delay its development; and our object, in the present intimation, is merely to suggest to the directors of railways, mining companies, and others, the inexpediency of their sanctioning any particular Telegraphic scheme, until made acquainted with the nature and extent of our patent improvements. BRETT & LITTLE.

140, Holborn-bars, March 3, 1847.

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